

**Final Report on the Audit of
Qwest's Performance Assurance Plans**

Prepared for:

The Qwest Regional Oversight Committee

By:



65 Main Street
Quentin, Pennsylvania 17083

(717) 270-4500 (voice)
(717) 270-0555 (facsimile)
Admin@LibertyConsultingGroup.com (e-mail)

October 28, 2005

Table of Contents

I.	Executive Summary	1
II.	Introduction and Approach	5
A.	Background and Purpose of the Review	5
B.	Overview of Qwest’s Performance Assurance Plans and Performance Measures .	5
C.	Scope of the Audit	7
D.	CLEC Input	7
E.	Liberty’s Review Methods	8
F.	Overall Conclusions	9
III.	Metric Reporting Systems and Processes	11
A.	Regulatory Reporting System	11
B.	Qwest Performance Assurance Reporting System	12
IV.	In-Scope Performance Measure Evaluation	14
A.	Overview of the Analysis	14
B.	PO-4 – Local Service Request (LSRs) Rejected	16
C.	PO-6 – Work Completion Notification Timeliness	23
D.	PO-7 – Billing Completion Notification Timeliness	31
E.	PO-20 – Manual Service Order Accuracy	38
F.	OP-5A – New Service Installation Quality Reported to Repair	48
G.	MR-9 – Repair Appointments Met	57
H.	BI-4 – Billing Completeness	63
V	Performance Assessment Plan Payments	72
A.	Background	72
B.	Analysis and Evaluation	74
VI.	Findings and Recommendations	89
A.	Findings	89
B.	Other Recommendations	117
Appendix A:	Findings Summaries	119
Appendix B:	Glossary of Acronyms	185

I. Executive Summary

The Qwest Regional Oversight Committee (ROC) chose The Liberty Consulting Group (Liberty) to conduct an audit of Qwest wholesale performance remedy payments and the results of certain Qwest wholesale performance measures for the year 2004 for the 13 states participating in the audit.¹ The ROC directed that Liberty verify the accuracy of i) 2004 Qwest Performance Assurance Plan (QPAP) payments to competitive local exchange carriers (CLECs) and the states participating in the audit, and ii) the performance results for selected measures. The ROC selected the following seven “in-scope” measures for detailed analysis in the audit:

- LSRs Rejected (PO-4)
- Work Completion Notification Timeliness (PO-6)
- Billing Completion Notification Timeliness (PO-7)
- Manual Service Order Accuracy (PO-20)
- New Service Installation Quality Reported to Repair (OP-5A)
- Repair Appointments Met (MR-9)
- Billing Completeness (BI-4).

In addition, Liberty reviewed the payments associated with all measures included in the QPAPs made to CLECs and the participating states during 2004 in order to assess the accuracy of these payments. More specifically, Liberty reviewed the:

- Inclusion of the correct measures and the assignment of these measures to the appropriate payment levels
- Proper application of Tier 2 triggers and occurrence calculations
- Accuracy of benchmark rounding and look-back calculations
- Proper application of the payment tables
- Appropriate restriction to CLECs that have opted into the plan
- Accurate determination of the Tier 2 Special Fund Portion
- Application of the special treatment for low-volume developing markets
- Determination of minimum payments to small CLECs at the end of the year.

The audit commenced in late April 2005 with initial requests for data from Qwest and a meeting and initial interviews with Qwest and a representative from the ROC Steering Committee held in Denver on April 27 and April 28, 2005. Based on this initial information, Liberty developed a work plan for the audit. Liberty revised this work plan based on comments from Qwest and the ROC Steering Committee. The ROC Executive Committee approved the final version of the work plan on July 14, 2005. Data gathering, interviews, and analysis continued throughout the summer of 2005. Liberty closed field work and issued a draft final report for comments by the ROC and Qwest on September 16, 2005. Liberty received the comments by October 7, 2005. This Final Report reflects the comments provided.

¹ All ROC states except Colorado participated in the audit.

In conducting this audit, Liberty drew from its experiences working on similar audits, including its audit of the Qwest performance measures prior to Qwest's Section 271 Application. Liberty obtained information from Qwest through 278 data requests and 28 separate interviews with Qwest personnel. Liberty also analyzed performance measurement and QPAP payment data provided by Qwest. Liberty also received and analyzed information from commission staffs and four CLECs about the receipt dates and amounts of QPAP payments during 2004.

As part of this audit, Liberty reviewed Qwest's business processes and systems, and reviewed Qwest's public and internal documentation. For the seven in-scope measures, Liberty examined the integrity of the data used in the calculations and replicated reported results. For the 2004 QPAP payments, Liberty reviewed the QPAP process, replicated the calculated payments, reviewed the payment process, and verified payments made.

During the audit, Liberty notified Qwest and the ROC Steering Committee of possible findings. Liberty issued 28 such preliminary findings during the course of the audit and provided an opportunity for Qwest to respond to them. Based on Qwest's response, Liberty withdrew two of the preliminary findings. Liberty classified the findings according to the nature and severity of the issues involved and used four classification levels defined in Section II E.

Overall, Liberty found that Qwest produced accurate performance results and penalty payments in the states covered by this audit during 2004. Most of the 26 findings that Liberty identified during the audit are relatively minor. For those that are likely to cause changes in reports or payments, the size and scope of the changes are likely to be relatively small. Qwest agreed with most of the findings and has either taken action or plans to take action about these. Liberty discusses the findings in detail in Section VI A. Not all findings apply to every state participating in the audit. Appendix A lists by state those findings that apply to the state and the status of Qwest's response to the findings.

Liberty identified seven findings as Classification 1, that is, findings for which Liberty believes a correction could cause a change in Qwest's reported results or QPAP payments or for which Qwest's practices or methods are clearly inconsistent with the Performance Indicator Definitions (PIDs) or QPAPs. These findings are:

- Qwest did not use the correct retail product as the parity standard for the wholesale "Non-Loaded 2-Wire Loop" product disaggregation when calculating the New Service Installation Quality Reported to Repair (OP-5A) measure. (Finding 7)
- Qwest did not implement a requirement of the Manual Service Order Accuracy (PO-20) PID that service orders created from CLEC Local Service Requests (LSRs) must be received and completed in the same version of IMA-GUI or IMA-EDI. (Finding 9)
- Qwest did not input the benchmark for the Installation Interval – Dispatches within MSAs (OP-4A & OP-4B) measures for the Line Splitting product. (Finding 12)

- Qwest did not correctly calculate the Work Completion Notification Timeliness (PO-6) notification interval for orders originating in northern Idaho. (Finding 14)
- Qwest did not include all eligible EDI billing notifications in the Billing Completion Notices for IMA-EDI (PO-7B) results. (Finding 23)
- Qwest incorrectly included PID changes in Minnesota that were not yet approved. (Finding 25)
- Qwest did not include the product disaggregation “EEL_DS1 Capable” in its QPAP payments for New Service Installation Quality Reported to Repair (OP-5A). (Finding 26)

In addition, Liberty identified 14 findings as Classification 2, that is, findings for which Liberty believes a correction may not change Qwest's reported results or QPAP payments, the magnitude of the change is unknown, or Qwest's practices or methods may be in error or inconsistent with the PID or QPAPs. Liberty identified three findings as Classification 3, that is, findings for which Liberty has found a gap or potential flaw in Qwest's methods, procedures, or documentation for which a change could lead to an improvement in the reliability of reported results or QPAP payment. Liberty identified two findings as Classification 4, that is, findings for which there is not a clear inconsistency with Qwest's interpretation of the PID or QPAP, but for which clarification is necessary; or for which Qwest has adopted conventions that are not documented in the PID or QPAPs or has interpreted these documents in ways that Liberty agrees are consistent with the wording but for which other reasonable interpretations are possible.

In addition to the findings, Liberty makes four additional recommendations for Qwest and the Commissions' consideration in Section VI A. Liberty believes that Qwest's approach is reasonable in these cases but believes that further action or communications between Qwest and the Commissions would be helpful. These recommendations are:

1. Consider adding to the PID documentation certain reasonable general exclusions made by Qwest that are not currently documented.
2. Discuss Qwest's exclusion of commercial agreement products from performance reports and the QPAPs.
3. Consider adding documentation to the QPAPs that explains the statistical procedure to follow in cases where a permutation test is required, but in which a test statistic cannot be calculated.
4. Investigate the feasibility of providing the Billing Account Number (BAN) to the CLECs in conjunction with their QPAP payment (for those CLECs that receive their payment by bill credit).

The remainder of this Final Report is organized as follows. Section II provides further background and description of the audit approach. Section III describes the systems that Qwest uses for performance reporting and QPAP payment calculation. Section IV provides details of Liberty's analysis of the seven in-scope measures specifically chosen for detailed investigation in the audit. Section V provides details of Liberty's analysis of the 2004 QPAP payments. Section VI provides details about Liberty's audit findings and recommendations. Finally, the report

contains two appendices. Appendix A summarizes by state the applicability and status of each of Liberty's findings. Appendix B provides a glossary of acronyms used in the report.

Liberty appreciated the graciousness and cooperation of Qwest during this audit and found the Qwest personnel to be very knowledgeable and responsive to Liberty's requests. Liberty also appreciated the interest and active involvement of the ROC Steering Committee throughout the audit process.

II. Introduction and Approach

A. Background and Purpose of the Review

The Qwest Regional Oversight Committee (ROC), an organization of the 14 public utility commissions of the states in which QWEST Corporation (Qwest) provides local exchange service, chose The Liberty Consulting Group (Liberty) to conduct an audit of Qwest wholesale performance remedy payments and the results of certain Qwest wholesale performance measures for the year 2004. A Qwest Performance Assurance Plan (QPAP) for each state provides the instructions for remedy payments; Qwest's Service Performance Indicator Definitions (PID) delineates the performance measures on which Qwest reports. The ROC directed that Liberty verify the accuracy of i) 2004 QPAP payments to competitive local exchange carriers (CLECs) and the states participating in the audit, and ii) the performance results for selected measures.

Liberty held an initial meeting with Qwest and a representative from the ROC on April 27 and April 28, 2005. At this meeting, Qwest presented an overview of the systems and process it uses to calculate and report the performance measures and to calculate and make the QPAP payments. Qwest also provided information about the QPAPs and how they differ from state to state, as well as about the performance measures included in the audit. Based on this information and the responses to more than 50 initial data requests, Liberty developed a work plan for the audit. Liberty revised this work plan based on comments from Qwest and the ROC Steering Committee. The ROC Executive Committee approved the final version of the work plan on July 14, 2005. This plan called for data gathering, interviews, and analysis to continue throughout the summer of 2005, with closure of field work and the issuance of a draft final report for comments by the ROC and Qwest on September 16, 2005. Liberty issued a draft report on that date and received comments by October 7, 2005. This Final Report reflects these comments.

B. Overview of Qwest's Performance Assurance Plans and Performance Measures

The QPAP is Exhibit K to the Statement of Generally Available Terms and Conditions (SGAT) for Qwest's wholesale local exchange services in each state. There are two basic versions of the QPAP, that used by Colorado and Minnesota and that used by the other ROC states. Even among the states that use the same basic version, the QPAPs differ in detail from state to state. In addition, Qwest revised the QPAPs during 2004 in most states.

In all cases, the QPAPs contain a two-tiered, self-executing payment scheme based on an assessment as to whether Qwest provides service to CLECs comparable to that it provides to its own retail customers. This assessment is based on the reported results of a set of performance measures and a comparison of those results to those of a defined set of retail analogs or fixed benchmarks, depending on the performance measure. Qwest makes Tier 1 payments to CLECs that elect to "opt in," that is, to participate in the QPAP. Qwest makes Tier 2 payments to the state. Each QPAP identifies the specific performance measures, calculation algorithms, statistical tests, and payment schedules used to determine the Tier 1 and Tier 2 payments.

The PID is Exhibit B to the SGAT and is the same document for all of Qwest's states. During 2004, Qwest updated this document four times so that five different versions were in effect. In particular, version 5.0a was in effect during January and February; version 6.0, from March through June; version 7.0, during July and August; version 7.1, during September and October; and version 8.0, during November and December.²

The PID categorizes performance measures into ten measurement groups:

- Electronic Gateway Availability (GA)
- Pre-Order/Order (PO)
- Ordering and Provisioning (OP)
- Maintenance and Repair (MR)
- Billing (BI)
- Database Updates (DB)
- Directory Assistance (DA)
- Operator Services (OS)
- Network Performance (NI and NP)
- Collocation (CP).

Within each of these measurement groups there are between 1 and 13 performance measures. The PID identifies each measure by measurement group and specific measurement number. For example, OP-5 is an Ordering and Provisioning measure that reports New Service Quality, or the quality with which Qwest provisions services that are free of CLEC/customer initiated trouble reports. Some measures also have sub-measures that are designated with a letter and a number. For example, OP-5A measures New Service Installation Quality Reported to Repair, or the percentage of service orders that are free of repair troubles within 30 days of installation completion, and OP-5B measures New Service Provisioning Quality, or the percentage of service orders that are free of provisioning trouble reports during the provisioning process and within 30 days of installation completion. In addition, Qwest reports many of the measures separately by product or product group. For example, Qwest reports OP-5A in over 30 product categories.

For each measure, the PID lists the purpose, provides a description, shows the formula Qwest uses to calculate the measure, states the allowed exclusions of transactions from the measure, and lists the standards to which the measure results are compared. The PID also describes the reporting period used, the measurement unit (*e.g.*, percentage and time period), the reported comparisons (*e.g.*, CLEC aggregate, specific CLEC, and Qwest retail), the reported levels of disaggregation (*e.g.*, region-wide and state-level), and the reported products.

² Response to Data Request #2.

C. Scope of the Audit

In this audit, Liberty reviewed the accuracy of i) wholesale performance remedy payments made by Qwest during 2004 and ii) seven performance measures used in assessing wholesale performance during the same time period. Thirteen of the ROC states chose to participate in the audit: Arizona, Idaho, Iowa, Minnesota, Montana, Nebraska, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming. Liberty's review was restricted to results and payments for these 13 states. Liberty reviewed results for the following seven performance measures to assess the accuracy of reported results during 2004:

- LSRs Rejected (PO-4)
- Work Completion Notification Timeliness (PO-6)
- Billing Completion Notification Timeliness (PO-7)
- Manual Service Order Accuracy (PO-20)
- New Service Installation Quality Reported to Repair (OP-5A)
- Repair Appointments Met (MR-9)
- Billing Completeness (BI-4).

Liberty also reviewed the QPAP payments made to CLECs and the participating states during 2004 in order to assess the accuracy of these payments. More specifically, Liberty reviewed the:

- Inclusion of the correct measures and the assignment of these measures to the appropriate payment levels
- Proper application of Tier 2 triggers and occurrence calculations
- Accuracy of benchmark rounding and look-back calculations
- Proper application of the payment tables
- Appropriate restriction to CLECs that have opted into the plan
- Accurate determination of the Tier 2 Special Fund Portion
- Application of the special treatment for low-volume developing markets
- Determination of minimum payments to small CLECs at the end of the year.

D. CLEC Input

In consultation with the ROC Steering Committee, Liberty developed a list of CLECs active in the participating states and attempted to learn whether any of these CLECs were willing to provide information useful to the audit. Liberty received information from four CLECs about the receipt dates and amounts of Tier 1 QPAP payments during 2004, which Liberty used in its assessment of the QPAP process.

E. Liberty's Review Methods

In conducting this audit, Liberty drew from its experiences working on similar audits, including its audit of the Qwest performance measures prior to Qwest's Section 271 Application. Liberty obtained information from Qwest through 278 data requests and 28 separate interviews with Qwest personnel. Liberty also analyzed performance measurement and QPAP payment data provided by Qwest.

During the audit, Liberty notified Qwest and the ROC Steering Committee of possible findings. Liberty issued 28 such preliminary findings during the course of the audit and provided an opportunity for Qwest to respond to them. Based on Qwest's response, Liberty withdrew two of the preliminary findings. Liberty classified the findings according to the nature and severity of the issues involved. The following table lists the criteria for classifying the findings that Liberty used in this audit:

Classification	Description
1	Liberty has uncovered an issue with Qwest's methods, procedures, or calculations for which, in Liberty's opinion, either: <ul style="list-style-type: none"> • Correction could cause a change in Qwest's reported results or QPAP payments; or • Qwest's practices or methods are clearly inconsistent with the PID or QPAPs.
2	Liberty has uncovered an issue with Qwest's methods, procedures, or calculations for which, in Liberty's opinion, either: <ul style="list-style-type: none"> • Correction may not change Qwest's reported results, or QPAP payments or the magnitude of the change is unknown; or • Qwest's practices or methods may be in error or inconsistent with the PID or QPAPs.
3	Liberty has found a gap or potential flaw in Qwest's methods, procedures, or documentation for which a change could lead to an improvement in the reliability of reported results or QPAP payments.
4	Liberty has found an issue that, in Liberty's opinion either: <ul style="list-style-type: none"> • Is not a clear inconsistency with Qwest's interpretation of the PID or QPAP but which should be clarified; or • For which Qwest has adopted conventions that are not documented in the PID or QPAPs or has interpreted these documents in ways that Liberty agrees are consistent with the wording but for which other reasonable interpretations are possible.

F. Overall Conclusions

Overall, Liberty found that Qwest produced accurate performance results and penalty payments in the states covered by this audit during 2004. During the audit, Liberty identified 26 findings. Most of the findings are relatively minor. For those that are likely to cause changes in reports or payments, the size and scope of the changes are likely to be relatively small.

The following table contains Liberty's findings along with the classification.

Finding 1:	Qwest's process for calculating New Service Installation Quality Reported to Repair (OP-5A) may have ignored troubles on some auxiliary lines. Classification: 2 (Preliminary Finding #1)	89
Finding 2:	Qwest was excluding troubles from New Service Installation Quality Reported to Repair (OP-5A) that did not correspond to valid exclusions documented in the PID. Classification: 2 (Preliminary Finding #2)	91
Finding 3:	Qwest was excluding LSRs with an "unknown state" data entry from LSRs Rejected (PO-4A and PO-4B) which does not correspond to valid exclusions documented in the PID. Classification: 2 (Preliminary Finding #3)	92
Finding 4:	Qwest did not include all products that should roll up to the "DS3 and Above" product disaggregation when calculating the New Service Installation Quality Reported to Repair (OP-5A) measure. Classification: 2 (Preliminary Finding #4)	93
Finding 5:	The PID for LSRs Rejected (PO-4) did not clearly address the treatment of LSRs rejected for non-standard reasons. Classification: 4 (Preliminary Finding #5) ...	94
Finding 6:	Qwest occasionally classified retail trouble reports incorrectly (<i>i.e.</i> , as wholesale records with an unknown company ID), and then excluded these records from the calculation of the Repair Appointment Met (MR-9) measure. Classification: 2 (Preliminary Finding #6).....	95
Finding 7:	Qwest did not use the correct retail product as the parity standard for the wholesale "Non-Loaded 2-Wire Loop" product disaggregation when calculating the New Service Installation Quality Reported to Repair (OP-5A) measure. Classification: 1 (Preliminary Finding #7)	96
Finding 8:	Qwest's documentation of the parity performance standards for unbundled loops in the New Service Installation Quality Reported to Repair (OP-5A) measure was unclear and misleading. Classification: 4 (Preliminary Finding #8)	97
Finding 9:	Qwest did not implement a requirement of the Manual Service Order Accuracy (PO-20) PID that service orders created from CLEC Local Service Requests (LSRs) must be received and completed in the same version of IMA-GUI or IMA-EDI. Classification: 1 (Preliminary Finding #9).....	99
Finding 10:	Qwest did not exclude all non-bill impacting records that originate in IABS from the Billing Completeness (Resale and UNE) (BI-4A) measure. Classification: 2 (Preliminary Finding #10).....	100
Finding 11:	Qwest omitted the UNE-P (Centrex 21) product from the Manual Service Order Accuracy (PO-20) results beginning with the December 2004 reporting month. Classification: 2 (Preliminary Finding #11)	100

Finding 12:	Qwest did not input the benchmark for the Installation Interval – Dispatches within MSAs (OP-4A & OP-4B) measures for the Line Splitting product. Classification 1 (Preliminary Finding #12).....	101
Finding 13:	Qwest did not have point-to-point controls in place for the transmission of Business Process Layer (BPL) data from IMA to PANS. Classification: 3 (Preliminary Finding #13).....	102
Finding 14:	Qwest did not correctly calculate the Work Completion Notification Timeliness (PO-6) notification interval for orders originating in northern Idaho. Classification: 1 (Preliminary Finding #14)	103
Finding 15:	Qwest's implementation of the Nebraska, Iowa, Montana, New Mexico, Wyoming, and South Dakota QPAPs did not allow for escalation of Tier 1 payments beyond 24 months. Classification: 2 (Preliminary Finding #15).....	104
Finding 16:	The Nebraska payment reference table for Tier 2 payments listed payment amounts to state funds that were not consistent with the Nebraska QPAP. Classification: 2 (Preliminary Finding #17)	105
Finding 17:	The Washington payment reference table for Tier 1 payments to CLECs for specific products listed "DS1 – LIS-ISP," but that product was not included in the payment input files. Classification: 2 (Preliminary Finding #18).....	105
Finding 18:	The RRS documentation of Qwest's processes and methods for calculating its performance measures contained errors, and was not up to date. Classification: 3 (Preliminary Finding #19).....	106
Finding 19:	The Service Order Validation (SOV) logic allowed some non-inward activity service orders to be included in the calculation of the Manual Service Order Accuracy (PO-20) performance measure. Classification: 2 (Preliminary Finding #21)	108
Finding 20:	Qwest's manual error code override process required an error code override before a jeopardy notice could be sent, occasionally resulting in a misreporting of the Manual Service Order Accuracy (PO-20) results. Classification: 2 (Preliminary Finding #22).....	109
Finding 21:	Qwest personnel improperly issued some Service Order Validation (SOV) error code overrides that may have resulted in the inaccurate reporting of the Manual Service Order Accuracy (PO-20) performance results. Classification: 2 (Preliminary Finding #23).....	110
Finding 22:	Qwest software did not properly include all appropriate call center tickets resulting in the inaccurate reporting of the Manual Service Order Accuracy (PO-20) performance results. Classification: 2 (Preliminary Finding #24)	111
Finding 23:	Qwest did not include all eligible EDI billing notifications in the Billing Completion Notices for IMA-EDI (PO-7B) results. Classification: 1 (Preliminary Finding #25).....	112
Finding 24:	Qwest did not have point-to-point controls in place for the transmission of CRIS billing information to MCAS. Classification: 3 (Preliminary Finding #26).....	113
Finding 25:	Qwest incorrectly included PID changes in Minnesota that were not yet approved. Classification: 1 (Preliminary Finding #27)	113
Finding 26:	Qwest did not include the product disaggregation "EEL_DS1 Capable" in its QPAP payments for New Service Installation Quality Reported to Repair (OP-5A). Classification: 1 (Preliminary Finding #28)	117

III. Metric Reporting Systems and Processes

A. Regulatory Reporting System

Qwest developed the Regulatory Reporting System (RRS) to help produce the performance measure results reports and calculate QPAP payments. Qwest calculates the QPAP payments using a module of RRS, the Qwest Performance Assurance Reporting System (QPARS). RRS is largely based on the Statistical Analysis System (SAS) statistical language.

Qwest produces the measurement data in various systems that it uses as part of its operations. For the in-scope performance measures, it uses the Performance Analysis System (PANS) to gather most of these data for use in RRS and for other internal purposes. Qwest uses SAS datasets and Oracle tables to store the raw data in PANS. RRS extracts data daily from PANS and other sources to create rolling SAS data files, known as rolling Ad Hoc files, which are specific to a given measure or group of measures. Qwest indicated that it applies no exclusions to the raw transaction data in PANS. Qwest applies all of the metric business rules to the data in RRS.³

RRS consists of three layers: the Data Layer, the Statistics Layer, and the Presentation Layer. The Data Layer gathers data from PANS and other sources and for each transaction determines the reporting dimensions that apply (*e.g.*, CLEC, state, and product), creates fields for use in applying the measurement business rules (*e.g.*, intervals, durations, and order-met flags), and flags those transactions for which general data exclusions apply (*e.g.*, exclusions for missing or invalid data and transactions that are normally excluded from all performance measure calculations). Qwest uses various reference tables to create these fields and flags. Qwest indicated that during this process, RRS does not drop any transactions. RRS only adds additional fields to the data records and places them into monthly Ad Hoc files that it creates from the rolling Ad Hoc files. The monthly Ad Hoc files comprise the data used for measurement calculations.

In the Statistics Layer, Qwest applies the business rules, and performs the statistical processing and database loading. The RRS Statistics Layer modifies the Ad Hoc data sets to include flags that designate the performance measures in which each transaction should be included using the exclusion rules appropriate to that measure. Typically, this allows the count of all the “Yes” flags for a given measure to become the denominator of the measure. Next, the Statistics Layer evaluates the numerator of the measure according to the type of measure (*i.e.*, percent or average). The Statistics Layer then builds the wholesale and retail aggregates for the parity comparisons and applies the statistical tests (*i.e.*, Z-score calculations and permutation tests) for all the combinations appropriate to the measure. QPARS uses the results of these tests in its calculation of the remedy payments.

Finally, the Statistics Layer creates summarized data sets, known as Master Files, for use by QPARS in the payments calculations and by the RRS Presentation Layer. The Master Files are summarized by the reporting dimensions (*e.g.*, product disaggregations, CLEC, state, or region).

³ Interview #1, April 27-28, 2005.

RRS generates the various internal and external results reports using the Presentation Layer. For some measures, the raw data are only available manually. Qwest enters such data via File Transfer Protocol (FTP) or manually in the RRS Presentation Layer. Qwest places the external performance measure reports on its website. Qwest also uses the Presentation Layer to fulfill CLEC requests for raw data and for internal analysis requests.⁴

B. Qwest Performance Assurance Reporting System

Qwest uses QPARS to calculate the QPAP payments. QPARS is based on SAS and Unix, and uses table-driven processing. Qwest runs QPARS on each state individually.

Except for the collocation performance measures, QPARS uses the Master Files created by the RRS Statistics Layer as the input for the calculations it performs. It also uses reference tables in RRS to determine items such as the appropriate benchmarks to use or the CLEC name. QPARS uses certain tables that are specific to the QPAP calculations, such as the payment tables, the critical values in the statistical tests, and the Tier 1 variance tables. QPARS also loads the dates at which each CLEC has opted into the QPAPs from a separate database.

Because of the significant differences between the Colorado and Minnesota QPAPs and those for the rest of the states, Qwest has created two separate models within QPARS. QPARS uses the Z-scores and permutation tests performed within RRS, and determines, based on sample size criteria, which test to use. QPARS also applies the appropriate critical values to determine whether the measure has passed or failed the tests.

The QPARS process begins with the assembly of all the data and tables necessary for the monthly calculations. QPARS then determines which measures to include for each state's QPAP and finds the retail comparatives for these measures. Next, it finds the benchmarks for each benchmark measure and adjusts the benchmarks for low volumes, as prescribed in the QPAPs. QPARS then determines whether each included parity measure and benchmark measure has passed or failed. If a measure has failed a test, QPARS checks the Tier 2 trigger to determine whether it has been met for the state. Because some measures require different payments for multiple occurrences of failure, QPARS determines the number of such occurrences. Based on this information, QPARS calculates the payments. Finally, it checks for special payments required for low-volume developing markets, prorates payments if the month is the first or last month of a CLEC's participation, and rounds the payments to the nearest dollar.

Occasionally, Qwest uncovers issues, such as a change in PID interpretation, programming errors, or missing source data, that result in system changes that could lead to a significant change in measure results. If Qwest makes such significant system changes, Qwest will rerun the

⁴ Qwest noted during Interview #1 on April 27-28, 2005, that "raw data sets are not always available for the RRS back-end process. In order to get a complete performance picture, some results are FTP'd or entered manually before reports are generated." Call center measures are example of those requiring the FTP process. However, this proviso does not appear to be applicable to any of the measures that are in scope for this audit.

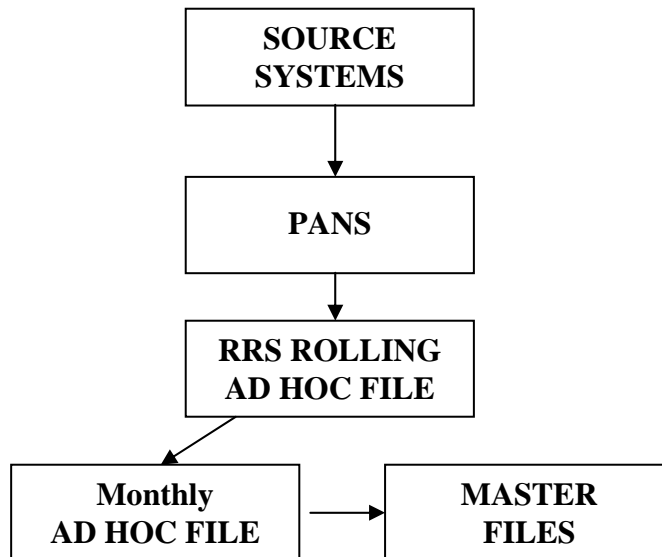
payment calculations. After a rerun, QPARS compares the before and after results. It calculates interest if the revised payment calculation indicates Qwest owes an additional amount. Qwest analyzes each change and traces the change back to the change management system.

IV. In-Scope Performance Measure Evaluation

A. Overview of the Analysis

The primary purpose of the review of the in-scope performance measures was to assess the accuracy of the results Qwest reported during 2004. To address this purpose, Liberty examined the processes that Qwest uses for calculating the performance measure results, evaluated the completeness and accuracy of the data used in the calculations, and assessed how well Qwest follows the PID in its calculations of the results. Liberty's general approach for its audit of the performance measures was to separate the analysis into two principal parts: i) examination of the validity of the data, and ii) recalculation of a sample of performance results.

The diagram below illustrates the principal data flow for the in-scope performance measures.



Qwest sends most data from its legacy source system to PANS.⁵ RRS extracts data daily from PANS to create rolling Ad Hoc files specific to a given measure or group of measures. At the same time, RRS calculates the derived fields or logic flags pertinent to the given measure. In order to calculate performance results, RRS creates from the rolling Ad Hoc files measure-specific monthly Ad Hoc files, containing the data relevant for the reporting month.

Liberty's objective for the data validation portion of the audit was to ensure the completeness and accuracy of the data Qwest uses to generate the reported results and to calculate the QPAP payment requirements associated with the in-scope measures. In its data validation analysis, Liberty had the following general goals:

⁵ In some cases, Qwest pulls data directly into RRS from certain source systems.

- Assess whether data collection from the source systems is sufficiently complete and accurate and whether Qwest ultimately inputs data into the performance measurement and remedy payment calculations that appropriately follow the PID
- Assess whether Qwest performs data manipulations or calculations accurately and in a way that is consistent with the PID
- Assess whether Qwest correctly calculates logic variables and derived values from the source data and correctly calculates values that use reference tables
- Assess whether Qwest accurately applies exclusions that are consistent with the PID and whether data excluded from results are readily identifiable.

In pursuing these goals, Liberty:

- Reviewed the documentation associated with each in-scope performance measure to determine the appropriate data to use in the calculations
- Obtained a high-level, general overview of the business processes and systems that generate the data used for the measure
- Reviewed the flows of data from source systems that directly feed PANS and RRS and from PANS to RRS⁶
- Reviewed the programming logic that Qwest uses to calculate the performance results⁷
- Examined a sample of RRS transaction data for each measure, drawn from each of the original three Bell Operating Company Regions served by Qwest⁸
- Examined the Master Files Qwest uses to calculate QPAP payments.

Liberty supplemented its analysis of the data validity with replication of results reported during 2004. Specifically, Liberty recalculated a sample of CLEC aggregate and individual CLEC results using state-specific data in the monthly Ad Hoc files.⁹

In the following sections, Liberty describes in more detail its analysis and conclusions for each in-scope performance measure. One change that occurred during 2004 was the introduction of commercial wholesale agreements between Qwest and the CLECs that had the effect of replacing certain unbundled network elements (UNEs) declassified by the Federal Communications Commission with alternative arrangements. These commercial agreement

⁶ Liberty notes that some of the in-scope measures use data from Ad Hoc files created for other measures. For example, OP-5A uses the Ad Hoc files created for OP-3 and the M&R measures. Liberty did not review the logic for creating Ad Hoc files of any measures that were not in scope for this audit.

⁷ In examining the data flows from the source systems and the programming logic in RRS, Liberty examined the current versions of the systems and reviewed changes that Qwest made in these systems during 2004 and since the end of 2004.

⁸ The original Bell Operating Company regions are the Eastern Region (former Northwestern Bell), consisting of Iowa, Minnesota, Nebraska, North Dakota, and South Dakota; the Central Region (former Mountain States Telephone), consisting of Arizona, Colorado, most of Idaho, Montana, New Mexico, Utah, and Wyoming; and the Western Region (former Pacific Northwest Bell), consisting of Oregon and Washington, and a portion of Idaho..

⁹ As noted below, for regional performance measures like PO-4A and PO-4B, Liberty used regional rather than state-level data.

products included Qwest Platform Plus (QPP), which is an alternative arrangement replacing the Unbundled Network Element – Platform (UNE-P), and commercial Line Sharing. Because these are products that Qwest provides voluntarily to the CLECs, rather than subject to the Section 251 requirements of the Telecommunications Act of 1996, Qwest has taken the position that these products should be excluded from the performance measures and QPAPs. As a result, during 2004, Qwest began excluding these products from reporting and QPAP calculations in most measures, as noted for the in-scope measures in the following sections.

B. PO-4 – Local Service Request (LSRs) Rejected

1. Background

The PO-4 performance measure monitors the extent to which Local Service Requests (LSRs) are rejected as a percentage of all LSRs. Qwest calculates PO-4 to provide information to help address potential issues that might be raised by the indicator of LSR rejection notice intervals (PO-3). PO-4 includes all LSRs that are rejected or receive a firm order confirmation (FOC) during the reporting period submitted through Interconnect Mediated Access-Graphical User Interface (IMA-GUI) (PO-4A), IMA-Electronic Data Interchange (IMA-EDI) (PO-4B) or received via facsimile (PO-4C). Standard reasons for rejections are: missing, incomplete, mismatching, or unintelligible information; duplicate request or LSR/purchase order number (PON); no separate LSR for each account telephone number affected; no valid contract; no valid end user verification; account not working in Qwest territory; service-affecting order pending; request is outside established parameters for service; and lack of CLEC response to Qwest question for clarification about the LSR.

PO-4 has no product disaggregations. PO-4A (IMA-GUI) and PO-4B (IMA-EDI) are disaggregated by reject type; manual reject (*i.e.*, PO-4A-1, PO-4B-1) or auto-reject (*i.e.*, PO-4A-2, PO-4B-2). PO-4C (LSRs received via facsimile) has no disaggregations because only manual rejects are possible.

Qwest reports PO-4 results for CLEC aggregate and for individual CLECs on a monthly basis. Unlike most measures, Qwest reports PO-4A and PO-4B regionally rather than by state. However, Qwest reports PO-4C both regionally and by state. PO-4 is a diagnostic measure, which means there are no benchmark or parity comparisons.

Versions 5.0a through 8.0 of Qwest's 14-State 271 PID list the following exclusions to PO-4:

- Records with invalid product codes
- Records missing data essential to the calculation of the measurement as defined by the PID
- Duplicate LSR numbers
- Invalid start/stop dates/times.

The PID versions 5.0a through 8.0 provide the following formula for the calculation of the PO-4 performance measure results:

*[(Total number of LSRs rejected via the specified method in the reporting period)
/ (Total of all LSRs that are received via the specified interface that were rejected
or FOC'd in the reporting period)] x 100.*

The definition of PO-4 did not change in the various PID versions that were in effect during 2004.

During 2004, PO-4 was not included in the QPAP of any state participating in this audit.

2. Analysis and Evaluation

Qwest reports the PO-4 sub-measures on an LSR level. The data for the PO-4 sub-measures come from several sources. Qwest collects data daily from its legacy systems, including Customer Request Management (CRM) and Interconnect Mediated Access (IMA), and stores them in databases within PANS. Qwest service centers use CRM to manage service requests from wholesale customers including key status events. CRM also receives data from other service delivery applications such as IMA, which CLECs use to input LSRs; Interconnect Imaging System (IIS), which is used to accept orders via facsimile; the Customer Records Information System (CRIS), which is used for billing; Service Order Processors (SOPs); Work Force Administration (WFA); and service request flow-through engines. To prepare data for the calculation of the measures, RRS extracts LSR data from the CRM database in PANS and auto-reject data from the IMA database in PANS. Qwest creates a rolling Ad Hoc file in RRS daily. Qwest later generates a monthly "locked" snapshot of the rolling Ad Hoc file, which it then uses to calculate reported results for PO-4. Although the Ad Hoc file comes from several sources, it is referred to as the CRM Ad Hoc file.¹⁰

CRM to PANS

The PO-4 and PO-6 metrics both require service request data for the calculation of results. CRM accumulates information on service requests and their associated service orders in approximately 23 Oracle tables. CRM assigns each LSR a Request ID, which is a unique key it uses to identify each service request.

Each time CRM receives a new record pertaining to either a new or existing LSR from one of the source systems, it assigns an Oracle-generated sequence number to the new record in its detail tables. Qwest then uses these sequence numbers to identify which records are new since the last PANS update. PANS identifies the last sequence number it previously received for a given table, and then extracts data from the CRM tables that have higher sequence numbers. With this method, Qwest can assure that on a given day it extracts all new data records from CRM and avoids duplicating any existing records.

¹⁰ The CRM Ad Hoc file is used to report measures PO-2, PO-3, PO-4, and PO-5. Other data sources are included in the CRM Ad Hoc file but are not relevant for PO-4.

Qwest extracts data, typically daily, from the CRM Oracle database into PANS.¹¹ The update process in PANS actually consists of three steps. First, PANS inserts new records from CRM as needed in the appropriate tables. Each record in the PANS tables contains a “last update date” indicating when it was last updated. Next, Qwest does a synchronization process to make sure that the data it has in PANS for each LSR reflect that which is most current in CRM based on the last update date. If CRM had received updated information on an order after PANS extracted the data, the data in PANS is already considered outdated. Qwest overlays updated data into the PANS tables and posts the last update date in the PANS record to reflect when it recorded the newer information from the CRM tables. Last, Qwest processes service request and service order records that have been “logically deleted” in CRM and marks the record as a virtually deleted record in the PANS tables even though it physically retains the record. Qwest uses the term “logically deleted” to mean “inactive” in CRM to help identify which version of a PON is currently active. When it receives a supplement on a PON, Qwest typically designates the earlier version as inactive in CRM and designates the supplement (which has a different LSR number) as the active version of the customer’s request.¹² For PO-4, if the original LSR is rejected and then supplemented, the data from the original LSR is available in PANS and available to RRS. Qwest counts only active completed LSRs for the PO-6 and PO-7 measures.¹³

Liberty reviewed the audit functions Qwest uses to assure that it received in PANS all records relevant to its performance measure calculations. Oracle performs a point-to-point control of the CRM to PANS process, comparing before and after counts of records transferred from CRM. Qwest indicated that if it encountered a record from CRM that PANS could not process, the system would alarm and the load process would fail.¹⁴ Qwest indicated that PANS generally did not transform data from CRM, but noted that in some cases PANS performs minor formatting changes to certain fields.¹⁵ CRM currently retains all data processed by this application since its creation in April 1999. PANS retains CRM Oracle data tables for 36 months and Regulatory Reporting holds the data an additional 36 months.¹⁶

Liberty was satisfied that Qwest’s process for extracting data into PANS from CRM was adequate to ensure that it retrieved all relevant data for the measures, and that the data did not change. Liberty was also satisfied that Qwest had implemented adequate controls over that process.

IMA to PANS

IMA is the system used by CLECs to submit LSRs. Unlike other source system to PANS data transfers with complex data structures, there is only a single table of data received from IMA and no look-up tables. IMA sends two files daily to PANS (PANS does not “pull” the files), one

¹¹ Qwest can process more than one day’s worth of data from the source systems to PANS if needed. Qwest creates SAS data sets in PANS by joining specific Oracle tables.

¹² In response to Data Request #228, Qwest stated that the earlier PON had to be marked as inactive for the record to be marked as logically deleted. As Liberty discusses under PO-6, there were instances in which Qwest did not mark the earlier version as inactive until it sent a notification to the CLEC, and therefore the earlier version was included in reported results.

¹³ Response to Data Request #184.

¹⁴ Interview #15, July 12, 2005.

¹⁵ Interview #15, July 12, 2005.

¹⁶ Response to Data Request #182.

from IMA-GUI and one from IMA-EDI. Both have the same structure. Qwest appends these files to PANS Oracle tables and later to SAS. There is no change in data structure but there are changes to field names.¹⁷

IMA sends one record for each LSR that resulted in an auto-reject in its data input module, the Business Process Layer (BPL). The records do not have LSR numbers because they were rejected before an LSR number was assigned. PANS also has three new derived fields: "source type" (*i.e.*, either IMA-GUI or IMA-EDI, depending on which source file the record came from); "insert date," or the date the file was processed; and "file date," or the date of the file (often one day later). The primary key for a record includes all fields in the table except "insert date" and "file date." Duplicates are eliminated only if all primary key fields match.¹⁸

Qwest indicated that it does not perform any data transformations on the data from IMA. Qwest has no specific error detection built into the process, but instead relies on Oracle return codes. Qwest stated that PANS Oracle retains data for 36 months even though the requirements document states 25 months; in fact, PANS Oracle still has the original data received in December of 2001 stored. PANS SAS stores data for 16 months. Qwest did not implement any changes to the IMA to PANS code in 2004.¹⁹

Liberty reviewed the audit functions Qwest uses to assure that data transfers from the source systems to PANS are complete. Liberty found that Qwest's IMA to PANS data transfer process has no point-to-point controls in place to ensure that all records sent by IMA were received by PANS on a daily basis.²⁰ IMA transfers the data to PANS via File Transfer Protocol (FTP).²¹ Qwest has implemented such controls for other source system to PANS FTP data transfer situations, but not for IMA to PANS. Qwest does, however, use an end-of-file marker to show that the FTP transmission was complete. If that is not received, the data transfer software would generate an error. Qwest admitted that this is not a standard control procedure. Liberty addresses this issue in more detail in the Findings and Recommendations section of this report.²²

PANS to RRS

The process for preparing the CRM Ad Hoc data, as described in Qwest's documentation, is quite complex.²³ As part of data validation, Liberty examined the process and code used by RRS to extract data from PANS on a daily basis for the PO-4 measures. Qwest uses this program to create a rolling Ad Hoc file for the measure using data from the CRM and IMA databases in PANS. Liberty also examined the separate SAS program that RRS uses to create the monthly locked Ad Hoc file. Using this SAS program, RRS selects those records from the rolling Ad Hoc file that have a notification date within the reporting month.

¹⁷ Interview #24, August 4, 2005.

¹⁸ Interview #24, August 4, 2005.

¹⁹ Interview #24, August 4, 2005.

²⁰ Interview #24, August 4, 2005 and responses to Data Requests #211 and #234.

²¹ According to Qwest's response to Data Request #92, in order to add controls, the source system would send the record count in addition to the data. If the number of records received matches the record count sent, then all records have been received and they would subsequently be loaded into the destination system. IMA does not send a record count and, consequently, Qwest has no confirmation of a match.

²² Liberty Finding 13.

²³ Response to Data Request #1.

Qwest pulls 62 days of data from the PANS database tables on a daily basis to create the rolling Ad Hoc file. Qwest pulls the data from PANS into the CRM Ad Hoc file from several PANS database tables, most of which originated in CRM.²⁴ Qwest also pulls auto-reject data from the IMA PANS database. Using macros, Qwest merges data from separate PANS data table pulls based on key fields. The same Ad Hoc files are used to eventually calculate several measures (*i.e.*, PO-2, PO-3, PO-4, and PO-5), all of which have several disaggregations. In its review of PO-4, Liberty focused on the PANS data extraction code that controls the PANS data that are pulled for PO-4.

During the data pull from the CRM PANS tables, Qwest obtains a list of all the rejection reasons for each LSR. Some LSRs have no rejects, some have multiple rejects. The code creates one record with all the reject reasons sorted and concatenated into one field. PANS sets variables to show the origin of the access system (*i.e.*, GUI, EDI, or IIS) used by the CLECs to input the LSRs, which determines whether the record belongs in PO-4A, PO-4B, or PO-4C respectively. The code also sets variables to differentiate between auto-reject and manual reject. This further disaggregates the PO-4 measure calculation. Finally, the code excludes win-back products because they are retail products.²⁵

After reviewing the SAS programs with Qwest, Liberty was satisfied that Qwest's process for extracting data from PANS was adequate to ensure that it retrieved all relevant data for the measure and that the data did not change.

RRS Processing for PO-4

The key data fields in the PO-4 Ad Hoc file are CLEC ID, status, last status date, source system, product type, request type, BPL reject, reject reason codes, and exclusion code. The PO-4C sub-measure also uses the state field. Qwest assigns the exclusion code in RRS, and uses it to identify which records to exclude from the measure; only those records with an exclusion code of "0" are included in reported results.

Qwest initializes all records with a default exclusion code value of "0". Qwest then calculates a variety of exclusion codes (listed in the table below) in RRS that it later uses to screen out specific records from the PO-4 measure. These records fall into two general categories: those with invalid data and those that Qwest believes should be excluded from the measure, such as test CLECs. The table below lists the PO-4 exclusion codes and types.

²⁴ Interview #9, June 21, 2005.

²⁵ Interview #9, June 21, 2005.

Exclusion Code	Exclusion Type
1	Test CLEC data
2	Invalid state code
3	Invalid product type
31	Invalid CLEC ID
32	Missing CLEC ID
49	Duplicate LSR numbers
63	Cancelled request
70	Missing flow-through indicator ²⁶
81	Invalid start/stop date/time

As noted above, the PID lists four exclusions for the PO-4 measure: i) records with invalid product codes, ii) records missing data essential to the calculation of the measurement, iii) duplicate LSR numbers, and iv) invalid start/stop dates/times. Qwest excludes records missing data essential to the calculation of the measurement using exclusion codes 2, 31, and 32.²⁷ Liberty believes that the exclusions for test CLECs and cancelled requests, while not specifically stated in the PID language, are reasonable.

Qwest also excludes LSRs with a value of “unknown” in the state field from PO-4A and PO-4B, which does not correspond to valid exclusions documented in the PID. Although the majority of Qwest measures are disaggregated by state (including PO-4C), Qwest reports PO-4A and PO-4B regionally, making identification of the state unnecessary for the calculation of those sub-measures. Qwest uses the same code macro to determine an invalid state exclusion (type 2) for all of its measures, including PO-4.²⁸

Qwest listed two situations for which an invalid state can occur: i) when a record contains a state code that is outside the Qwest 14-state local services operating region, and ii) when a record's state code cannot be determined. Liberty agrees that the first situation provides a valid reason for exclusion; however, Liberty believes that the second situation does not. Liberty addresses this issue in the Findings and Recommendations section of this report.²⁹

Liberty examined the method that Qwest uses to calculate the five PO-4 sub-measures. Qwest uses the source system field to determine whether the record will be included in PO-4A (IMA-GUI), PO-4B (IMA-EDI), or PO-4C (facsimile). The denominator for each of these sub-measures is simply a count of the records from the relevant source system that are not otherwise excluded. The numerator is a count of the LSR records that were rejected for standard reasons as defined in the PID. PO-4A-1 and PO-4B-1 count manual rejects and PO-4A-2 and PO-4B-2 count BPL rejects.

Qwest's code searches within the concatenated list of reject codes for those that are 'not standard' as defined in the PID. When there are multiple reject codes, if one or more is 'not standard' then Qwest does not count the record in the numerator even if there are other reject

²⁶ Interview #21, July 28, 2005. Qwest indicated that the exclusion for missing flow-through indicator is no longer relevant due to coding changes.

²⁷ Response to Data Request #35.

²⁸ Response to Data Request #64.

²⁹ Liberty Finding 3.

codes for the same record that are contained in the 'standard reasons' list. Furthermore, Qwest does not count a record in the denominator if any one of the reject codes is 'not standard.' Liberty found that it is unclear whether Qwest's interpretation of the PID is correct. Liberty addresses this issue in the Findings and Recommendations section of this report.³⁰

Because the PID does not explicitly list them, Qwest provided Liberty with the invalid product types. The list was developed and approved during the ROC workshops in January of 2001.³¹ Qwest provided code and logic for many derived fields that are not contained in the CRM extraction code.³² Qwest also provided a complete list of reject codes, categorized each as standard or non-standard, and indicated whether each was associated with manual or auto-reject.³³ Liberty used this information to complete its analysis. Liberty found that a much higher percentage of LSRs were excluded from PO-4C reporting for invalid product type than was true for PO-4A and PO-4B. Qwest explained that Public Access Lines and Administrative Lines, both of which are invalid product types for PO-4, represent the bulk of that anomaly. Neither can be ordered via IMA so they must be ordered via facsimile.³⁴

Liberty concluded that Qwest's method for calculating this measure conforms to the PID with the exception of the findings discussed in the Findings and Recommendations section of this report.

Qwest listed a number of changes in 2004 to the PO-4 processing in the revision history of the programming code. All of the changes fell into one of two categories: i) a modification to account for new reject codes, or ii) a modification to remove the QPP and commercial Line Sharing products from the calculations. If a CLEC signed the new Qwest commercial agreement, their records for products such as UNE-P (POTS) were subsequently mapped to new product types such as QPP POTS and excluded from the measure reporting. Qwest did not implement any system changes between January 2004 and January 2005 that required a rerun of PO-4 results originally published in 2004.³⁵ Liberty verified that the changes implemented did not require results to be rerun.³⁶

As part of its data validation efforts, Liberty focused on the December 2004 monthly Ad Hoc files, which Qwest uses for the calculation of results. Liberty reviewed transactions from the monthly Ad Hoc files, using a random sample of 1,000 records each for PO-4A and PO-4B and all records for PO-4C drawn from each of the original three Bell Operating Company Regions served by Qwest. The monthly Ad Hoc files contain both original and derived data fields. In order to substantiate the programming logic it examined earlier, Liberty reviewed the derived data fields needed for the calculation of the PO-4 measure results to verify RRS calculated them correctly from the source data.

³⁰ Liberty Finding 5.

³¹ Response to Data Request #134.

³² Response to Data Request #135 and Interview #21, July 28, 2005.

³³ Response to Data Request #136.

³⁴ Response to Data Request #214.

³⁵ *Summary of Notes for Qwest Regional Performance Results Report*, dated January 24, 2005, published on Qwest's website.

³⁶ Response to Data Request #63.

Liberty also reviewed the December 2004 Ad Hoc Master File created by Qwest. Liberty reviewed the records in this file for the PO-4 disaggregations, and found that they accurately captured the results that Liberty recalculated for CLEC aggregate results.

Liberty reviewed Qwest's documentation of the processes that it uses to calculate the PO-4 results and found it to be generally useful.³⁷ However, Liberty noted some errors and omissions. Specifically, the documentation omitted PO-4C and its diagnostic status from the overview section.³⁸ The description of the data sources for the PO-4 measure was misleading (it stated that the data are extracted from PANS CRM and EXACT) and unclear regarding the IMA data source for auto-rejects. Liberty noted that the descriptions for certain PO-4 derived fields did not reflect the use of a key derived field and the treatment of LSR records that are not rejected.³⁹ Additionally, the description of the PO-4 measure calculation was inaccurate and did not include the product code variable in the formulas.⁴⁰ Qwest addresses these issues in the Findings and Recommendations section of this report.⁴¹

Replication

Liberty's objective for the PO-4 reporting replication was to recalculate and reproduce Qwest's reported results to confirm that they were calculated comprehensively and accurately. Liberty used the data found in the RRS December 2004 CRM Ad Hoc data set. Liberty developed its own code to perform the replication.

Liberty's PO-4 replication efforts focused on reproducing the December 2004 reported results for each of the five disaggregations associated with this performance measure. Because Qwest only reports PO-4A and PO-4B regionally, Liberty replicated CLEC aggregate results regionally. Additionally, Liberty replicated thirteen CLEC-specific results on a regional basis for each of PO-4A-1, PO-4A-2, PO-4B-1, and PO-4B-2. Liberty replicated PO-4C in a similar manner, but for state-specific results. Liberty successfully replicated Qwest's December 2004 state-specific reported metric result for PO-4 for all disaggregations for the CLEC aggregate and for each of the thirteen selected CLECs.

C. PO-6 – Work Completion Notification Timeliness

1. Background

The PO-6 measure assesses the timeliness of Qwest's issuing electronic notification to CLECs that provisioning work on all service orders comprising a CLEC LSR have been designated as completed in the service order processor (SOP) and that the service is available to the customer. Qwest reports PO-6A for notices it transmits via the IMA-GUI, and reports PO-6B for notices it transmits via IMA-EDI. The PID lists the following exclusions:

³⁷ Chapter 10 of Regulatory Reporting Systems Documentation, December, 2004.

³⁸ Qwest provided updated documentation to rectify the omission in response to Data Request #42.

³⁹ Qwest provided updated documentation to update field descriptions in response to Data Request #186.

⁴⁰ Qwest provided updated documentation to update measure calculations in response to Data Request #187.

⁴¹ Liberty Finding 18.

- Records with invalid completion dates
- LSRs submitted manually (e.g., via fax)
- Access service requests (ASRs) submitted via Exchange Access Control & Tracking (EXACT).

Additionally, because timeliness is based on published Gateway Availability hours, the PID indicates that Qwest should exclude system downtime from the calculation.

The PID version 8.0 provides the following formula for PO-6A, Work Completion Notification Timeliness for IMA-GUI:

Σ [(Date and Time Completion Notification made available to CLEC) – (Date and Time the last of the service orders that comprise the CLEC LSR is completed in the Service Order Processor)] / (Number of completion notifications made available in the reporting period).

The formula for PO-6B, Work Completion Notification Timeliness for IMA-EDI, has slightly different wording:

Σ [(Date and Time Completion Notification transmitted to CLEC) – (Date and Time the last of the service orders that comprise the CLEC LSR is completed in the Service Order Processor)] / (Number of completion notifications transmitted in the reporting period).

Qwest reports PO-6 on a statewide basis for CLEC aggregate and individual CLECs; the standard is six hours.

The notes section of the PID states that the time a notice is “made available” via the IMA-GUI is the time Qwest stores a status update related to the completion notice in the IMA Status Updates database. At that point, the CLEC can immediately view the notice using the Status Updates window or by using the LSR Notice Inquiry function. Qwest made one minor change related to the PO-6 measure during 2004. Specifically, Qwest dropped a note in the PID version 5.0a notes section from subsequent versions.⁴² This note provided background information and had no effect on the calculation of results.

During 2004, PO-6 was included in the QPAPs of all 13 states participating in this audit.

⁴² The note stated: “[i]nitially the end time for PO-6B was the time a notice is ‘made available’ via IMA-EDI. This is the time Qwest completed processing for the completion notice in IMA immediately prior to transmission. Qwest developed the ability to capture the transmission date and time from EDI and began basing the end time on the EDI transmit date and time effective with Jan 02 data.”

2. Analysis and Evaluation

Qwest reports the PO-6 sub-measures on an LSR level. The data for the PO-6 sub-measures come from several sources. Qwest collects data daily from its legacy systems, specifically LSR information from Customer Request Management (CRM) and service order information from the Regional Service Order Repository (RSOR), and stores them in various databases within PANS.⁴³ To prepare data for the calculation of the measures, RRS extracts both LSR and service order data from the CRM database in PANS and RSOR (SOP) data from the service order (BCSOP) and service order supplemental (BCSUP) databases in PANS.⁴⁴ RRS also receives information from the IMA-GUI and IMA-EDI systems via flat files.⁴⁵ Qwest creates a rolling Ad Hoc file in RRS daily. Qwest later generates a monthly “locked” snapshot of the rolling Ad Hoc file, which it then uses to calculate reported results for PO-6.

RSOR (SOP) to PANS

As part of its data validation, Liberty reviewed the process Qwest uses to send CRM and RSOR source system data to PANS, and examined the level of controls over that process. Please refer to Section IV B for a discussion of the flow of data from CRM to PANS.

Qwest uses RSOR, an operational data store, to capture “real time” updated information from its three SOPs: Regional Service Order Logistics and Reference (RSOLAR), Service Order Processing and Distribution (SOPAD), and Service Order Logistics and Reference (SOLAR). Each time RSOR reads in a new record from one of the source systems, it records a row of data into an RSOR activity table, along with the “activity modification date” for that record, which is the date the service order information was recorded in RSOR. After an order has been completed, cancelled, or posted, RSOR will retain data on that order for 62 days.⁴⁶

Qwest extracts data, typically daily, from various RSOR database tables through an internal system gateway into a staging area in PANS consisting of a series of Oracle working tables.⁴⁷ Qwest later structures these working tables into several detailed SOP Oracle tables in PANS.⁴⁸ Qwest extracts data from RSOR based on the activity modification date. For example, today Qwest would extract data on service orders included on the RSOR activity table that have an activity modification date of yesterday. The data extracted from RSOR contains i) information on new service orders created on the activity modification date, and ii) added or modified information recorded on the activity modification date for service orders already recorded in PANS. With this method, Qwest can assure that on a given day, it extracts all new data records from RSOR and avoids duplicating any existing records. Qwest overwrites the information for a

⁴³ Qwest service centers use CRM to manage service requests from wholesale customers. CRM also receives data from other service delivery applications such as IMA, IIS, CRIS, SOP, WFA-C, and service request flow-through engines.

⁴⁴ Qwest also creates an RSOR Ad Hoc file directly from the RSOR data in PANS for use in other measures but not PO-6. In the discussion of PO-6, Liberty's references to RSOR data mean only those service order data derived from BCSOP and BCSUP, not the RSOR Ad Hoc file.

⁴⁵ During Interview #6, June 24, 2005, Qwest stated that RRS pulls data from IMA that include both GUI and EDI data on notifications, and it then pulls in separate EDI data for the notification dates/times for EDI orders.

⁴⁶ Interview #16, July 11, 2005.

⁴⁷ Qwest can process more than one day's worth of data from the source systems to PANS if needed.

⁴⁸ Qwest confirmed that it creates the SAS datasets in PANS from the Oracle data tables.

service order that already exists in PANS with the new updated information from RSOR. Qwest appends the new service order records to the PANS tables. Each record in the PANS tables contains a date indicating when it was last updated.

When PANS receives data from RSOR that contains an error, it simply adds the information to the data tables as is. Qwest noted that service orders with errors typically fall out for manual handling and that in such cases, PANS will receive a corrected record for the service order later and overwrite the one with errors. Qwest noted that there is a possibility that some records could be rejected in PANS, but that it is rare. These cases usually involve a null value in a key column, and these records are written to a log file. Qwest indicated that PANS generally did not transform the data it receives from RSOR, but noted that in some cases PANS performs housekeeping on fields, such as concatenating separate fields into one new field. In general, Qwest retains SOP data in PANS for at least 36 months.⁴⁹

Qwest found that half the volume of its daily service order data from RSOR related to status changes, and thus in many cases Qwest could reprocess data from only selected data tables rather than reprocessing all the data for each service order. Qwest instituted "smart processing" in May 2004, which greatly reduced the time PANS needed to extract data from RSOR. The level of processing, and therefore the amount of data that PANS extracts from RSOR, depends upon what had changed on a given order. Information in RSOR for each service order allows Qwest to determine the level of processing required for that given record. Liberty asked Qwest about implementation of this process change. Qwest indicated that it performed two weeks of system testing before implementation and parallel testing for two weeks after implementation. Qwest stated that it found no major problems with the new process.⁵⁰ Liberty believes that the process was implemented properly, and, while this process improvement reduces processing time, it has no effect on the measure.

Liberty reviewed the audit functions Qwest uses to assure that it received all data that it should. Oracle performs Qwest's point-to-point control for the RSOR to PANS process by comparing before and after counts of records transferred from RSOR. Qwest uses a record count function within the RSOR system to add an extra measure of data integrity assurance beyond the point-to-point control. Under this control process, Qwest compares daily counts in RSOR of newly-processed service orders and service order activities by state to the number of service orders and service order activities it processes into PANS. Differences beyond one service order per state and two to three service order activities per state (which allow for orders with bad data) trigger an alarm in the RSOR to PANS process.

Liberty was satisfied that Qwest's process for extracting data into PANS from RSOR was adequate to ensure that it retrieved all relevant data for the in-scope measures, and that the data did not change. Liberty was also satisfied that Qwest had implemented adequate controls over that process.

⁴⁹ Interview #16, July 11, 2005.

⁵⁰ Interview #16, July 11, 2005.

PANS to RRS

As part of its data validation, Liberty examined the process and code used by RRS to extract data from PANS on a daily basis. Liberty examined the SAS program in RRS that extracts the data necessary for the PO-6 sub-measures from PANS. Qwest uses this program to create a rolling Ad Hoc file for the measure using data from the BCSOP, BCSUP, and CRM databases in PANS, as well as data from IMA-EDI and IMA-GUI. Liberty also examined the separate SAS program used by RRS to create the monthly locked Ad Hoc file. Using this SAS program, RRS selects those records from the rolling Ad Hoc file that have a notification date within the reporting month.

The RRS process for preparing the PO-6 data from PANS, as described in Qwest's documentation, is quite complex.⁵¹ To create the rolling Ad Hoc file, Qwest combines records on work-completed service orders for the current month with those of three previous months from the PANS BCSUP database, which contains all status changes on service orders. Qwest next combines records on work-completed service orders for the current month with those of three prior months from the PANS BCSOP database, which contains line-level detail on service orders. The process next merges the BCSUP and BCSOP records using a unique key field, and retains all BCSOP records.⁵² The next step in the process involves joining PANS CRM service order and LSR version information. These data are then joined with the merged RSOR data. Qwest then joins the RSOR/CRM data to IMA-EDI and IMA-GUI data that contain notification dates and times. As part of the data preparation process, Qwest compares the PO-6 data with RRS CRM Ad Hoc files in order to identify QPP and commercial Line Sharing products, which are excluded from the calculation of the measure.

In the SAS program used to create the rolling Ad Hoc file, Qwest assigns the CLEC ID using an Access Carrier Name Abbreviation (ACNA) look-up table. If the program cannot find a match, it assigns a CLEC ID of "unknown," which means that Qwest will count the record in CLEC aggregate results only. The program also calculates certain derived fields, specifically the notification interval and exclusion code. Qwest uses general CLEC and state look-up reference tables in the process of preparing data for the PO-6 metric, but does not use any other measure-specific reference tables.

Liberty reviewed the SAS programs with Qwest and was satisfied that Qwest's process for extracting data from PANS was adequate to ensure that it retrieved all relevant data for the measure, and that the data did not change.

RRS Processing for PO-6

The key data fields in the PO-6 Ad Hoc file are state, CLEC ID, product code (*e.g.*, "ALL" or "QPP_POTS"), IMA system identifier (GUI or EDI),⁵³ exclusion code, completion date/time, notification date/time, and notification interval. Qwest assigns exclusion codes in RRS, and uses

⁵¹ Response to Data Request #1.

⁵² An order will always be in the BCSOP file, which contains the original basic information on the order. The order will only appear in the BCSUP file if it was ever supplemented. Qwest retrieves the completion date/time from the BCSUP file, and if the order was never supplemented, Qwest uses a default value of midnight, which is the earliest work completion time it can provide on any given date.

⁵³ This IMA system field indicates whether the order was confirmed via IMA-GUI or EDI.

them to identify which records to exclude from the measure; only those records with an exclusion code of "0" are included in reported results. RRS calculates the notification interval as the difference between the work completion date/time and the notification date/time.⁵⁴ The work completion date/time is that of the last service order completed on an LSR. The notification date/time for IMA-GUI represents the time the notice is stored in the IMA status database and can be viewed by the CLEC, and Qwest defines the notification date for EDI orders as the time Qwest actually transmits the notice via EDI.⁵⁵ Qwest provides this notification at the LSR level, when all service orders comprising the LSR are completed.

Qwest calculates a variety of exclusion codes in RRS that it later uses to screen out specific orders from the PO-6 measure. These records fall into two general categories: those with invalid data and those that Qwest believes should be excluded from the measure, such as test CLECs. The table below lists the PO-6 exclusion codes and types.

Exclusion Code	Exclusion Type
1	Test CLEC data
2	Invalid state code
22	Work completion date not available
23	Invalid work completion date
25	Cancelled order
35	Blank or null completion/notification date
36	Notification time earlier than completion time
52	Blank or invalid IMA source field
72	Missing service order number
91	Not applicable (not "request completed") status

The PID lists three exclusions for the PO-6 measure: i) records with invalid completion dates, ii) LSRs submitted manually, and iii) ASRs submitted via EXACT. Qwest excludes records with invalid (or missing) completion dates using exclusion codes of 22, 23, 35, and 36. Because Qwest uses IMA-GUI and EDI notification date information, which by definition does not include information on manual orders, Qwest excludes LSRs submitted manually from the measure.⁵⁶ Qwest excludes ASRs submitted via EXACT because none of the databases used in the calculation of PO-6 contain such data.⁵⁷

With the exclusion codes, Qwest makes additional types of exclusions that are not explicitly stated in the PID. Liberty believes that the exclusions for missing or invalid data, such as orders with invalid states, no IMA system identifier, missing notification dates, or missing service order numbers, are reasonable because Qwest either cannot accurately categorize the order or it cannot calculate the notification interval.⁵⁸ Similarly, because PO-6 measures completed orders, excluding cancelled orders and those without a status of "complete" is reasonable. Liberty also believes it is reasonable to exclude test CLEC orders.

⁵⁴ The interval calculation takes into account the system downtime for IMA.

⁵⁵ Response to Data Request #265.

⁵⁶ Response to Data Request #238.

⁵⁷ Response to Data Request #239.

⁵⁸ Liberty suggests that Qwest consider adding to the PO-6 PID exclusions the phrase it uses elsewhere: "records missing data essential to the calculation of the measurement per the PID."

Liberty examined the method that Qwest uses to calculate the two PO-6 sub-measures. Qwest begins with the monthly Ad Hoc file that contains orders with a notification date within the reporting month, which is consistent with the PID definition for the denominator. To calculate the denominator for the PO-6A measure, Qwest counts the number of IMA-GUI LSRs with an exclusion code of 0. To calculate the denominator for the PO-6B measure, Qwest counts the number of EDI LSRs with an exclusion code of 0. To calculate the numerator for either sub-measure, Qwest sums the notification intervals for the LSRs in the denominator.

Liberty concluded that Qwest's method for calculating this measure conforms to the PID.

During 2004, Qwest implemented a few changes to the RRS program that extracts data from PANS for the PO-6 measure. For the August 2004 data month, Qwest added new coding to identify the records from PANS associated with QPP products under commercial agreements. For the October 2004 data month, Qwest added the code for commercial Line Sharing.⁵⁹ Qwest uses the product code field to select only those records with a code of "ALL," which Qwest's program assigns to orders that are not identified as QPP or commercial Line Sharing. Qwest also made a change of a housekeeping nature that had no effect on reported results.

Qwest did, however, encounter a problem that required a rerun of March 2004 PO-6B results.⁶⁰ Qwest found that it did not receive EDI data files in RRS starting March 20, 2004. The PANS server that supported the file transfer had been physically moved. Because the server location was hard-coded into the transfer program, the transfer no longer worked. Qwest revised its code to access the correct server and reran the PO-6 data sets to incorporate the missing file information.⁶¹ Liberty believes that Qwest corrected the error appropriately, and verified that Qwest republished results.

As part of its data validation efforts, Liberty focused on the December 2004 monthly Ad Hoc files, which Qwest uses for the calculation of results. Liberty reviewed transactions from the monthly Ad Hoc files, using a sample of over 100 transactions drawn from each of the original three Bell Operating Company Regions served by Qwest. The monthly Ad Hoc files contain both original and derived data fields. In order to substantiate the programming logic it examined earlier, Liberty reviewed the derived data fields needed for the calculation of the PO-6 measure results to verify whether RRS calculated them correctly from the source data.

Liberty focused on the exclusion code and notification interval fields. Liberty found that Qwest calculated the exclusion codes properly.⁶² Liberty also reviewed Qwest's calculations for the notification interval, and found that Qwest performed them accurately except for a small number

⁵⁹ Response to Data Request #237.

⁶⁰ *Summary of Notes for Qwest Regional Performance Results Report*, dated January 24, 2005, published on Qwest's website.

⁶¹ Responses to Data Requests #91 and #220. Qwest uses a PANS server for the IMA data, but does not store the data in a PANS database.

⁶² The only exclusion codes present in the December 2004 PO-6 Ad Hoc file were 0, 22, 25, 35, and 36; therefore Liberty limited its examination to these five codes.

of orders from the northern portion of Idaho. Liberty addresses this issue in more detail in the Findings and Recommendations section of this report.⁶³

When Liberty reviewed the PO-6 Ad Hoc data, it also found a small number of records with the same combination of state, CLEC ID, and service order number, and asked Qwest to investigate. Qwest indicated that these cases involved a newer version of a PON. Each PON version is assigned a new LSR number. Qwest explained that if the service center does not make the last version of the PON active, the notification will be sent on the wrong version/LSR number. The service center will typically later change the newer version to an active status and manually send a notice for that version as well. The notifications on both LSRs associated with the PON will be captured in PO-6.⁶⁴ Given the relatively small number of orders affected by these administrative errors, Liberty believes that Qwest's approach of counting both versions is reasonable.

Liberty also reviewed the December 2004 Ad Hoc Master File created by Qwest. Liberty reviewed the records in this file for the PO-6 sub-measures, and found that they accurately captured the results that Liberty recalculated for CLEC aggregate results and selected CLECs in each state.

Liberty reviewed Qwest's documentation of the processes that it uses to calculate the PO-6 results. Liberty found that Qwest's description for exclusion code 23 was incorrect, and inconsistent with its programs. Qwest subsequently provided Liberty with documentation that corrected this error.⁶⁵ Additionally, Liberty found that the formulas for calculating the sub-measures listed in the RRS documentation were incorrect,⁶⁶ and Qwest agreed.⁶⁷ Qwest subsequently provided Liberty with documentation that corrected this error.⁶⁸ Liberty also found that Qwest had not updated its documentation to show how it excludes QPP and commercial Line Sharing products.

Replication

Liberty's objective for the replication task area was to recalculate Qwest's PO-6A and PO-6B CLEC aggregate December 2004 reported results for each state participating in the audit to confirm that they were calculated comprehensively and accurately. In addition, Liberty recalculated monthly results for five selected CLECs.

Liberty used the data in the PO-6 Ad Hoc table that Qwest provided to recalculate reported monthly results for each sub-measure.⁶⁹ Liberty developed its own code to perform the replication based on the PID. Liberty successfully replicated Qwest's December 2004 state-specific reported metric result for PO-6A and PO-6B for the CLEC aggregate and for selected CLECs.

⁶³ Liberty Finding 14.

⁶⁴ Response to Data Request #208.

⁶⁵ Response to Data Request #256.

⁶⁶ Liberty Finding 18.

⁶⁷ Interview #1, April 27, 2005. The documentation shows formulas containing PO-6 indicator flags, which are not actually used to select records for the numerator and denominator.

⁶⁸ Response to Data Request #236.

⁶⁹ Response to Data Request #67.

D. PO-7 – Billing Completion Notification Timeliness

1. Background

The PO-7 measure assesses the timeliness with which electronic billing notifications are made available or transmitted to CLECs, focusing on the percentage of notifications that are made available (for CLECs) or posted in the billing system (for Qwest retail) within five business days. Qwest reports PO-7A for notices it transmits via the IMA-GUI and reports PO-7B for notices it transmits via IMA-EDI. It reports PO-7C as billing system posting completions for retail. The PID lists the following exclusions for all three sub-measures:

- Services that are not billed through CRIS (e.g., Resale Frame Relay)
- Records with invalid completion dates.

There are two additional exclusions for PO-7A and PO-7B:

- LSRs submitted manually
- ASRs submitted via EXACT.

The PID version 8.0 provides the following formula for PO-7A, Billing Completion Notification Timeliness for IMA-GUI:

(Number of electronic billing completion notices in the reporting period made available within five business days of posting complete in the SOP) / (Total number of electronic billing completion notices made available during the reporting period).

The formula for PO-7B, Billing Completion Notification Timeliness for IMA-EDI, has slightly different wording:

(Number of electronic billing completion notices in the reporting period transmitted within five business days of posting complete in the SOP) / (Total number of electronic billing completion notices transmitted during the reporting period).

The PID provides the following formula for PO-7C, the retail analog for PO-7A and PO-7B:

(Total number of retail service orders posted in the CRIS billing system in the reporting period that were posted within five business days) / (Total number of retail service orders posted in the CRIS billing system in the reporting period).

Qwest reports PO-7A and PO-7B on a statewide basis for CLEC aggregate and individual CLECs, and reports PO-7C on a statewide basis for Qwest retail. The standard for PO-7A and PO-7B is parity with PO-7C.

There was one small change to the PO-7 measure during 2004. Specifically, Qwest dropped a note contained in the notes section of PID version 5.0a from subsequent versions.⁷⁰ This note provided background information and had no effect on the calculation of results.

During 2004, PO-7 was included in the QPAPs of all 13 states participating in this audit.

2. Analysis and Evaluation

Qwest reports the PO-7 sub-measures on a service order level. The data for the PO-7 sub-measures come from several sources. Qwest collects data from its legacy systems daily and stores them in various databases within PANS. To prepare data for the calculation of the measures, RRS extracts PANS RSOR (SOP) data from the service order data (BCSOP) and service order supplemental data (BCSUP) databases in PANS. RRS also receives billing completion information from IMA-GUI and IMA-EDI flat files. Qwest creates a rolling Ad Hoc file in RRS daily. Qwest later generates a monthly "locked" snapshot of the rolling Ad Hoc file, which it then uses to calculate reported results for PO-7.

RSOR (SOP) to PANS

As part of its data validation, Liberty reviewed the process Qwest uses to send RSOR source system data to PANS, and examined the level of controls over that process. Section IV C has additional detail on the flow of data from RSOR to PANS.

PANS to RRS

As part of its data validation, Liberty also examined the process and code used by RRS to extract data from PANS on a daily basis. Liberty examined the SAS program in RRS that extracts the data from PANS necessary for the PO-7 measures. Qwest uses this program to create a rolling Ad Hoc file for the measure using data from the RSOR database in PANS, as well as data directly from IMA-EDI and IMA-GUI. Liberty also examined the separate SAS program used by RRS to create the monthly locked Ad Hoc file. Using this SAS program, RRS selects those records from the rolling Ad Hoc file that have a specific date field within the reporting month. For retail records, Qwest uses the date that the order posted as complete status in the SOP. For wholesale EDI records, Qwest uses the date that it sent the notification via IMA-EDI; for wholesale IMA-GUI records, Qwest uses the date the notification was made available to the CLEC.⁷¹

The process for preparing the PO-7 data, as described in Qwest's documentation, is quite complex.⁷² To create the wholesale data, Qwest first combines billing completion notice information from IMA-GUI and EDI files, retaining only those with notification dates within the reporting period. Qwest then imports five months of completed service order data from the PANS BCSOP database, which contains line level detail on service orders. RRS then merges the

⁷⁰ The note stated that, "[p]rior to Jan 02 the end time for EDI was based on the time a notice was "made available." The time a notice was "made available" via IMA-EDI consisted of the time Qwest completed processing for the completion notice in IMA immediately prior to transmission of the EDI notification."

⁷¹ Response to Data Request #244.

⁷² Response to Data Request #1.

combined IMA-GUI/EDI data with the wholesale BCSOP data based on a unique key, and retains all notification records. RRS also retains posting-completed retail orders from BCSOP.

RRS next imports five months of completed service order data from the PANS BCSUP database, which contains all status changes on service orders. The process next merges the BCSUP data with the BCSOP/IMA-GUI/EDI wholesale data using a unique key field. As part of the data preparation process, Qwest compares the PO-7 data with RRS RSOR Ad Hoc files⁷³ in order to identify QPP and commercial Line Sharing products, which are excluded from the calculation of the measure.

In the SAS program used to create the rolling Ad Hoc file, Qwest assigns the CLEC ID using an ACNA lookup table. If the program cannot find a match, it assigns a CLEC ID of "unknown," which means that Qwest will count the record in CLEC aggregate results only. The program also calculates certain derived fields, specifically the notification interval and exclusion code. Qwest uses general CLEC and state look up reference tables in the process of preparing data for the PO-7 metric, but does not use any other measure-specific reference tables.

Liberty reviewed the SAS programs with Qwest and was satisfied that Qwest's process for extracting data from PANS was adequate to ensure that it retrieved all relevant data for the measure, and that the data did not change.

RRS Processing for PO-7

The key data fields in the PO-7 Ad Hoc file are state, CLEC ID, product code (e.g., "ALL" or "QPP_POTS"), IMA system identifier (IMA-GUI or IMA-EDI), exclusion code, notification interval, PO-7A inclusion indicator, and PO-7B inclusion indicator. Qwest assigns the exclusion code in RRS, and uses it to identify which records to exclude from the measure; only those records with an exclusion code of "0" are included in reported results. Qwest calculates the notification interval as the number of business days between the work completion date and the notification date. For wholesale orders, Qwest uses the date that the order reaches a posted complete status in the SOP as the completion date. If that date is not available, Qwest uses the date the physical work was completed.⁷⁴ Although not contained in the PID, Liberty believes that this convention of using the work completion date is reasonable. The work completion date is usually the same as (but can be earlier than) the SOP completion date, and is therefore a valid proxy for the purposes of calculating the notification interval. The notification date for IMA-GUI represents the time the notice is stored in the IMA status database and can be viewed by the CLEC, and the notification date for IMA-EDI orders is the time Qwest actually transmits the notice via EDI.⁷⁵ For retail orders, Qwest defines the notification date as the date that the order was posted in CRIS.

Qwest derives the PO-7A and PO-7B inclusion indicator fields to identify those records included in the numerator and denominator of these sub-measures. RRS derives the PO-7A indicator for

⁷³ RRS produces RSOR Ad Hoc files for use in calculating other measures. These Ad Hoc files are different from the PANS BCSOP and BCSUP data files, which PANS creates using SOP data stored in RSOR

⁷⁴ Response to Data Request #243. According to Qwest, the majority of the time the SOP completion date and the work completion date will be the same.

⁷⁵ Response to Data Request #265.

IMA-GUI records and the PO-7B indicator for IMA-EDI records. The definition for the numerator of the sub-measures refers to billing completion notices made available within five days of work completion in the SOP. Qwest assigns records a “1” in the indicator field if the notification interval is five business days or fewer. These records will be included in the numerator and denominator of the measure. Qwest assigns any other records a “0” in the indicator fields, which means the record will be included in the denominator only, because it is not on time. Qwest also uses these indicator fields to calculate the PO-7C retail standard. If the retail notification interval is five business days or fewer, Qwest records a “1” in both indicator fields, otherwise, it assigns the fields a “0.”

Qwest calculates a variety of exclusion codes in RRS that it later uses to screen out specific service orders from the PO-7 measure. These records fall into two categories: those with invalid data and those that Qwest believes should be excluded from the measure, such as test CLECs. The table below lists the PO-7 exclusion codes and types.

Exclusion Code	Exclusion Type
1	Test CLEC data
2	Invalid state code
13	Invalid retail Line Sharing
22	Completion date not available
23	Invalid completion date
25	Cancelled order
29	Blank notification time
30	Invalid notification time
35	Blank or null completion or notification date
37	Application date after completion date
52	Blank or invalid IMA source field
72	Missing service order number
83	IMA status is not “posted”
95	Not eligible notification/EDI file data missing

Qwest uses these exclusion codes to identify records with missing or invalid dates, missing IMA system identifier, missing service order numbers, cancelled orders, retail Line Sharing orders,⁷⁶ and orders that do not have a completed status. For example, Qwest uses an exclusion code of 35 if either the completion date or notification date is blank.

As noted above, the PID lists two exclusions for the PO-7A and PO-7B sub-measures: i) LSRs submitted manually, and ii) ASRs submitted via EXACT. The PID also lists two exclusions that apply to all three sub-measures: i) services that are not billed through CRIS, and ii) records with invalid completion dates. Liberty examined the methods Qwest used to implement these exclusions. For the PO-7A and PO-7B sub-measures, Qwest uses IMA-GUI and IMA-EDI notification date information, which by definition does not include information on manual orders; therefore, Qwest excludes LSRs submitted manually from the measure.⁷⁷ Qwest excludes

⁷⁶ According to the RRS documentation, Qwest checks the sales code for retail records to determine whether the code indicates a wholesale record that merely looks like a retail record. According to Qwest, these records will be counted on the wholesale side and should be excluded from retail.

⁷⁷ Response to Data Request #238.

ASRs submitted via EXACT because none of the databases used in the calculation of PO-7 contain such data.⁷⁸

For all three sub-measures, Qwest excludes records with invalid (or missing) completion dates using exclusion codes of 22, 23, 35, and 37.⁷⁹ Qwest uses CRIS to bill CLECs for LSR-ordered products, but not for ASR-ordered products. Qwest excludes wholesale services not billed through CRIS because, as noted above, it sends only data on LSRs to PANS.⁸⁰ For retail, Qwest selects those records that have a status of “posted pass,” which is the final status of a service order after the order has posted to CRIS.⁸¹ Therefore, the retail data in the Ad Hoc files relate only to those orders billed through CRIS.

Qwest also excludes records associated with wireless accounts from reported results. RRS identifies these records by their specific CLEC IDs and changes the product code for these to “other access,” and Qwest excludes these wireless records in its calculation of results.⁸²

With the exclusion codes, Qwest makes additional types of exclusions not covered by the PID. Liberty believes that the exclusions for missing or invalid data, such as orders with invalid states, no IMA system identifier, missing notification dates, or missing service order numbers, are reasonable because either Qwest cannot accurately categorize the order or it cannot calculate the notification interval.⁸³ Similarly, because PO-7 measures notifications on completed orders, excluding cancelled orders and those without a status of “posted” is reasonable. Liberty also believes it is reasonable to exclude test CLEC orders from wholesale, and retail Line Sharing orders from retail. Similarly, it is reasonable to exclude wireless accounts.

Liberty examined the method that Qwest uses to calculate the PO-7 sub-measures. Qwest begins with the monthly Ad Hoc file that contains orders with a notification date within the reporting month, which is consistent with the PID definition for the denominator. To calculate the denominator for the PO-7A measure, Qwest counts the number of IMA-GUI service orders with an exclusion code of 0 and a PO-7A inclusion indicator value of 0 or 1. To calculate the denominator for the PO-7B measure, Qwest counts the number of IMA-EDI service orders with an exclusion code of 0 and a PO-7B inclusion indicator value of 0 or 1. To calculate the numerator for either sub-measure, Qwest counts the number of orders in the denominator with an inclusion indicator value of 1, which means that the notification was sent within five business days.

⁷⁸ Response to Data Request #239.

⁷⁹ Liberty asked Qwest why it excluded records with an application date later than a completion date, because the application date is not needed for the measure calculation. In response to Data Request #250, Qwest explained that when an order has an application date later than the completion date, it considers the accuracy of the entire record to be suspect, and therefore excludes it from PO-7.

⁸⁰ Response to Data Request #240.

⁸¹ Response to Data Request #262.

⁸² Liberty asked Qwest why it did not apply the same exclusion to PO-6. In response to Data Request #257, Qwest stated that it needed to identify and reclassify wireless records because they otherwise would be classified and reported as retail. Qwest does not report retail in PO-6, and so reclassification is not needed.

⁸³ Liberty suggests that Qwest consider adding to the PO-7 PID exclusions the phrase it uses elsewhere: “records missing data essential to the calculation of the measurement per the PID.”

To calculate the denominator for the Qwest retail result, PO-7C, Qwest selects all records with a CLEC ID of "USW," an exclusion code of 0, and a PO7A or PO7B indicator value of 0 or 1. To calculate the numerator, Qwest counts the number of records in the denominator with an indicator value of 1.⁸⁴

Liberty concluded that Qwest's method for calculating this measure conforms to the PID.

During 2004, Qwest implemented a few changes to the RRS program that extracts data from PANS for the PO-7 measure. For the August 2004 data month, Qwest added new coding to identify the records from PANS associated with QPP products under commercial agreements. For the October 2004 data month, Qwest added the code for commercial Line Sharing. Qwest uses the product code field to select only those records with a code of "ALL," which Qwest's program assigns to orders that are not identified as QPP or commercial Line Sharing. For the March 2004 data month, Qwest added logic to identify records associated with wireless accounts. Previously, Qwest treated such records as retail. Qwest also made some changes of a housekeeping nature that had no effect on reported results.

Qwest implemented one system change that required a rerun of March 2004 PO-7B results.⁸⁵ Qwest found that it did not receive EDI data files in RRS starting March 20, 2004. The PANS server that supported the file transfer was physically moved. Because the server location was hard-coded into the transfer program, the transfer no longer worked. Qwest revised its code to access the correct server and reran the PO-7 data sets to incorporate the missing file information.⁸⁶ Liberty believes that Qwest corrected the error appropriately and republished results.

As part of its data validation efforts, Liberty focused on the December 2004 monthly Ad Hoc files, which Qwest uses for the calculation of results. Liberty reviewed transactions from the monthly Ad Hoc files, using a sample of over 100 transactions drawn from each of the original three Bell Operating Company Regions served by Qwest. The monthly Ad Hoc files contain both original and derived data fields. In order to substantiate the programming logic it examined earlier, Liberty reviewed the derived data fields needed for the calculation of the PO-7 measure results to verify whether RRS calculated them correctly from the source data.

Liberty focused on the exclusion code, notification interval, and inclusion indicators fields. Liberty found that Qwest calculated the exclusion codes properly.⁸⁷ Qwest also calculated the notification interval and inclusion indicator fields properly.⁸⁸ Liberty found that Qwest had adopted certain conventions when calculating the notification interval, which is the number of

⁸⁴ In response to Data Request #260, Qwest stated that it uses the PO7A indicator to calculate the retail comparable for PO-7A and the PO7B indicator to calculate the retail comparable for PO-7B.

⁸⁵ *Summary of Notes for Qwest Regional Performance Results Report*, dated January 24, 2005, published on Qwest's website.

⁸⁶ Responses to Data Requests #91 and #220. Qwest uses a PANS server for the IMA data, but does not store the data in a PANS database.

⁸⁷ The only exclusion codes present in the December 2004 PO-7 Ad Hoc file were 0, 13, 22, 23, 35, 37, and 95; therefore Liberty's examination was limited to these seven codes.

⁸⁸ Qwest calculates the interval in business days, rather than minutes, as it does for PO-6, therefore the issue Liberty identified in PO-6 regarding northern Idaho orders would essentially have no effect.

business days between the work completion date and the notification date. Specifically, i) Qwest treats a holiday as a business day if it is the notification date, ii) Qwest does not treat a holiday as a business day when it is the completion date, iii) Qwest treats a Saturday as a business day if it is either the notification or completion date, and iv) Qwest excludes both Saturdays and Sundays in the calculation if the notification date is a Sunday.⁸⁹ Liberty believes that Qwest's approach is reasonable, but these conventions should be listed in Qwest's documentation for the measure.

When Liberty reviewed the PO-7 Ad Hoc data, it found a small number of records with the same combination of state, CLEC ID, and service order number, and asked Qwest to investigate. Qwest indicated that these cases involved a newer version of the PON. Qwest assigns each PON version a new LSR number. Qwest explained that if the service center does not make the last version of the PON active, the notification will be sent on the wrong version/LSR number. The service center will typically later change the newer version to an active status and manually send a notice for that version as well. The notifications on service orders related to both LSRs associated with the PON will be captured in PO-7.⁹⁰ Given the relatively small number of orders affected by these administrative errors, Liberty believes that Qwest's approach of counting both versions is reasonable.

Liberty found that nearly all IMA-EDI records had an exclusion code of 95, which meant that there was no notification date available from EDI. Eight states had no reported results for PO-7B because all EDI records were excluded.⁹¹ Qwest explained that the CLEC must subscribe to receive billing completion notices. Therefore, even though a CLEC may submit an order via EDI, Qwest sends a notice only to those certified and set up to receive the notices in this way. According to Qwest, during the December 2004 reporting period, only one CLEC subscribed to receive IMA-EDI billing completion notices.⁹²

When Liberty examined the data associated with the one certified CLEC, it found that only a portion of the CLEC's service orders had IMA-EDI billing notifications, with the rest being assigned an exclusion code of 95. Liberty found that Qwest improperly excluded a large percentage of eligible service orders in PO-7B reported results. Liberty addresses this issue in more detail in the Findings and Recommendations section of this report.⁹³

Liberty also reviewed the December 2004 Ad Hoc Master File created by Qwest. Liberty reviewed the records in this file for the PO-7 sub-measures, and found that they accurately captured the results that Liberty recalculated for CLEC aggregate results and selected CLECs in each state.

Liberty reviewed Qwest's documentation of the processes and systems that it uses to calculate the PO-7 results. Liberty found that some of Qwest's documentation contained errors or was not up to date. In its description of how it derives certain fields, Qwest refers to data fields that are

⁸⁹ In response to Data Request #246, Qwest confirmed that the listed items represented its approach.

⁹⁰ Response to Data Request #209.

⁹¹ Those eight states are Idaho, Iowa, Montana, Nebraska, New Mexico, North Dakota, South Dakota, and Wyoming.

⁹² Responses to Data Requests #142 and #241.

⁹³ Liberty Finding 23.

not defined in the documentation and are not in the Ad Hoc files.⁹⁴ The documentation shows the calculation of PO-7C using a PO7C indicator flag, which is not in the actual Ad Hoc file. Qwest later provided updated documentation to correct this error.⁹⁵ Liberty also found that Qwest had not updated its documentation to show how it excludes QPP and commercial Line Sharing products.

Replication

Liberty's objective for the replication task area was to recalculate Qwest's PO-7A and PO-7B CLEC aggregate December 2004 reported results for each state participating in the audit to confirm that they were calculated comprehensively and accurately. For each participating state, Liberty also recalculated the PO-7C Qwest retail result, which is the parity standard for PO-7A and PO-7B. In addition, Liberty recalculated monthly results for four selected CLECs.

Liberty used the data in the PO-7 Ad Hoc table that Qwest provided to recalculate reported monthly results for each sub-measure.⁹⁶ Liberty developed its own code to perform the replication based on the PID. Liberty successfully replicated Qwest's December 2004 state-specific reported metric result for PO-7A and PO-7B for the CLEC aggregate and for selected CLECs, as well as the reported metric result for PO-7C, Qwest retail.

E. PO-20 – Manual Service Order Accuracy

1. Background

The PO-20 measure evaluates the degree to which Qwest accurately processes CLECs' LSRs that are electronically-submitted and manually processed by Qwest into Qwest service orders, based on mechanized comparisons of specified LSR-service order fields and focuses on the percentage of manually-processed service orders that are accurate/error-free.

PO-20 includes only service orders created from CLEC LSRs that Qwest receives electronically via IMA-GUI or IMA-EDI and manually processes in the creation of service orders, regardless of flow-through eligibility, subject to exclusions specified below.⁹⁷ PO-20 includes only service orders from the product reporting categories of i) Resale and UNE-P (POTS and Centrex 21) and ii) Unbundled Loops.⁹⁸ PO-20 includes service orders that request inward line or feature activity (*i.e.*, Change, New, and Transfer order types), are assigned a due date by Qwest, and are completed/closed in the reporting period.

⁹⁴ Specifically, Qwest uses the POSTTIME and SENTTIME fields as part of its definitions for LIT_DATE and NTFYDATE.

⁹⁵ Response to Data Request #260.

⁹⁶ Response to Data Request #67.

⁹⁷ To be included in the measurement, service orders created from CLEC LSRs must be received and completed in the same version of IMA-GUI or IMA-EDI.

⁹⁸ Unbundled Loops includes Analog and Non-Loaded 2/4 wire, DS1 Capable, DS3 and higher Capable, ADSL Compatible, XDSL-I Capable, and ISDN-BRI Capable.

Qwest classifies an inward line or inward feature service order as “accurate” if the fields specified in the Service Order Fields Evaluated section of the PID are all accurate on the service order and if no CLEC notifications to the call center have generated call center tickets coded to LSR/service order (LSR/SO) mismatch for that order. Qwest checks for call center tickets for 30 days following the completion data of the service order. Qwest counts service orders as accurate if the contents of the relevant fields, as recorded in the completed service orders involved in provisioning the service, properly match or correspond to the information from the specified fields as provided in the latest version of associated LSRs. Service orders generated from LSRs receiving a Provider Initiated Activity (PIA) value will be counted as accurate if each and every mismatch has a correct and corresponding PIA value.⁹⁹ Service orders, including those otherwise considered accurate under the above-described mechanized field comparison, will not be counted as accurate if Qwest corrects errors in its service order(s) as a result of contacts received from CLECs no earlier than one business day prior to the original due date.

PO-20 is a very recent addition to the Qwest measures. Versions 5.0a through 7.0 of Qwest's 14-State 271 PID did not contain PO-20. Versions 7.1 and 8.0 list the following exclusions to PO-20:

- Service orders that are the subject of call center tickets counted in OP-5B and OP-5T as having new service problems attributed to service order errors
- Cancelled service orders
- Service orders that cannot be matched to a corresponding LSR
- Records missing data essential to the calculation of the measurement per the PID.

The PID versions 7.1 and 8.0 provide the following formula for the calculation of the PO-20 results:

$$\left[\frac{\text{Number of accurate evaluated Service Orders}}{\text{Number of evaluated Service Orders completed in the reporting period}} \right] \times 100.$$

Qwest is implementing PO-20 in phases:

- Phase 0 was the first version of PO-20 and used sampling of limited fields.¹⁰⁰ It was available through July 2004 with a benchmark of 97 percent.
- Phase 1 began the mechanized comparison of fields for LSR received via IMA version 15.0 or higher.¹⁰¹ The PID listed 29 LSR data fields to be evaluated for accuracy. Phase 1 was in effect from August 2004 through November 2004 with a benchmark of 96 percent.¹⁰²

⁹⁹ PIAs are essentially a set of legitimate reasons for having a particular service order mismatch error. PIAs are based on unique circumstances of the service order (e.g., due date changes by the CLEC or a telephone number change).

¹⁰⁰ The PID also refers to Phase 0 as PO-20(Old).

¹⁰¹ Phase 1 consists of all manually-processed qualifying Service Orders per product reporting category from throughout Qwest's 14-state local service region.

¹⁰² In response to Data Request #44, Qwest stated that Phase 1 began reporting results in May but there was a three-month trial period before results became official.

- Phase 2 added more fields for comparison. The PID listed 4 additional LSR data fields to be evaluated. It was in effect from December 2004 with a benchmark of 95 percent.¹⁰³
- Phases 3 and 4 add still more fields to be evaluated for the 2005 timeframe (beyond Liberty's audit period). The benchmark will remain at 95 percent for Phases 3 and 4.

Qwest reports PO-20 one month in arrears (*i.e.*, results first appear in reports one month later than the results for other measures that are not reported in arrears) in order to exclude service orders that are the subject of call center tickets counted in OP-5B and OP-5T as having new service problems attributed to service order errors. As such, Qwest reports service orders completed in October 2004 with the November 2004 PO-20 results. Qwest reports results at an individual statewide level for each of the 14 states in the Qwest service area. It also reports results at a regional level. Results are available for CLEC aggregate and individual CLECs.

During 2004, PO-20 was included in the QPAPs of all states except Arizona¹⁰⁴ and Minnesota.¹⁰⁵

2. Analysis and Evaluation

Qwest reports the PO-20 sub-measures on a service order level. The primary data source for PO-20 is a new system that Qwest developed specifically for PO-20 called Service Order Validation (SOV). SOV performs a mechanized comparison of the service order and LSR, and determines whether a set of data fields has been accurately populated. SOV also contains data necessary to determine whether service orders were received and completed using the same version of IMA-GUI or IMA-EDI. This must be true for the service order to be eligible for inclusion in PO-20 results as described in Note 1 of the PO-20 PID. Qwest uses SOV to make corrections to service orders up to one day prior to the due date as permitted by the PID, thus allowing Qwest to improve performance.¹⁰⁶ The Flow Through System (FTS) stores all the data necessary to perform the comparisons in SOV tables within the FTS environment. PANS performs a daily pull of the SOV tables into the PANS warehouse. Qwest later pulls the SOV-based PANS data into RRS to create the PO-20 Ad Hoc files. Qwest also pulls data into RRS from RSOR, the Call Center Database, and the prior month's OP-5 Ad Hoc file to add information to the PO-20 Ad Hoc file.¹⁰⁷

¹⁰³ In response to Data Request #44, Qwest stated that Phase 2 began reporting results in September but there was a three-month trial period before results became official.

¹⁰⁴ While PO-20 was not required in the Arizona QPAP in 2004, the Arizona Corporation Commission issued an order on February 15, 2005 (as noted in the Qwest response to Data Request #206) that had the effect of including PO-20. Qwest included PO-20 in Arizona QPAP calculations for August and September 2004, but removed it for the remainder of 2004. After the February 2005 Commission order, Qwest made retroactive payments for the October, November, and December 2004 data months.

¹⁰⁵ The Minnesota Public Utilities Commission has not yet approved PO-20 for inclusion in the Minnesota QPAP. However, as noted below in Finding 25, Qwest included PO-20 in Minnesota QPAP calculations for August through December 2004. Qwest removed PO-20 from the Minnesota QPAP calculations in January 2005, but did not make any attempt to recover the QPAP payments made during 2004 based on PO-20.

¹⁰⁶ Interview #1, April 27-28, 2005.

¹⁰⁷ Interview #10, June 17, 2005

The SOV System

IMA provides LSR data to SOV. The Service Order Processors (SOPs) provide service order data. Completion Notifications for service orders come from CRM. The only important output generated by SOV is the set of error codes for each comparison. Much of the rest of the data are simply passed through to users in Qwest's Service Delivery Centers and to PANS for eventual processing by RRS.¹⁰⁸ Liberty examined the system requirements documentation for SOV.¹⁰⁹

Qwest inputs any service orders that drop to manual handling to the SOV system and matches them with the appropriate LSR.¹¹⁰ SOV performs a field-by-field evaluation of the service order based on the field values in the LSR. The SOV Data Name table contains the rules for which fields are to be compared and the SOV Error Messages document lists the error codes to be populated. The SOV Requirements Document provides a description of fields that have multiple valid entries.¹¹¹ Several more spreadsheets contain additional mapping information for certain fields.¹¹² When SOV identifies a mismatch, it generates an error code. Multiple error codes can be present for the same service order.

Qwest personnel review the output of the SOV runs prior to service order completion and have the opportunity to correct service order errors. Qwest displays any mismatches in a module of IMA only accessible by Qwest personnel. Liberty examined Qwest's internal documentation for using this module.¹¹³

As part of the review process, Qwest personnel manually enter Provider Initiated Activity (PIA) codes, which are essentially a set of legitimate reasons for having a particular service order mismatch. Qwest negotiated the list of PIA values and the rules governing when a specific PIA value is used with the CLEC community via the change management process.¹¹⁴ PIAs are based on unique circumstances of the service order (*e.g.*, due dates that do not meet the standard interval). Liberty examined the complete list of PIA codes and their associated conditions within Qwest's CLEC notification procedures for PIA situations.¹¹⁵

Through its methods and procedures, Qwest restricts the ability of its personnel to issue an error code override. Only certain authorized Qwest employees can issue an override when SOV has generated an error code based on a mismatch in the service order fields that is not really an error, even though SOV correctly identified a mismatch in the fields compared. Such a procedure is necessary because the SOV program is not sophisticated enough to handle every situation.

¹⁰⁸ Interview #20, July 29, 2005.

¹⁰⁹ Qwest response to Data Request #43.

¹¹⁰ Response to Data Request #93. Only those LSRs with a product listed in the PID product categories are included in SOV validation.

¹¹¹ Response to Data Request #43.

¹¹² Response to Data Request #251.

¹¹³ Response to Data Request #222.

¹¹⁴ Response to Data Request #94.

¹¹⁵ Response to Data Request #223.

Corrected/modified service order fields, PIA codes, and error code overrides become part of the service order record that gets sent back to SOV for another run. SOV continues to make comparisons (pending passes) of the modified service order and the LSR until the service order reaches completed status. Only the final service order (the completion pass) counts in the PO-20 measurement calculation.

Qwest stated that there were no substantial changes in SOV between Phase 1 and Phase 2. The software was designed to handle all field comparisons and their associated error types for both phases. The RRS code later looks at the error codes generated by SOV for each service order and compares them to a list of error codes that are required to be included in each phase.¹¹⁶

In order to determine whether the SOV system properly determines mismatches, Liberty worked with Qwest to perform a manual comparison of the data fields in service orders and their associated LSRs, as required by PO-20. Liberty selected a sample of 24 service orders from the December 2004 PO-20 Ad Hoc file to be used in the comparison. The sample was designed to contain service orders that SOV had determined contained mismatches including some with multiple error codes. The sample also was designed to contain service orders that SOV determined had no mismatches. In addition, Liberty designed the sample to have all states represented and to contain a mix of product types.

Liberty compared all relevant fields based on the PO-20 PID and the numerous look-up tables used to determine valid field entries. Based on the manual checks Qwest and Liberty jointly performed, Liberty determined that SOV properly determined mismatches in every case when they existed. Liberty and Qwest also confirmed that SOV properly identified those service orders without mismatches. Thus, the SOV system appears to be properly finding all mismatches it should for the sample of service orders Liberty used in the audit.¹¹⁷

During its review of the December 2004 PO-20 Ad Hoc file, however, Liberty discovered a service order that should not have been included in PO-20 results because it was not an order for inward activity. According to Qwest's process, partial disconnects often result in a "C" (change) order when they are actually retail disconnect activity. In this case, there was a partial conversion of a retail account to wholesale products. The order completed with no SOV-identified mismatches. Qwest included the record as an accurately processed service order, when it should not have been included in the results for PO-20.¹¹⁸ Liberty addresses this issue in more detail in the Findings and Recommendations section of this report.¹¹⁹

While reviewing the error code override process and examining an additional sample of 35 service orders with a variety of SOV error codes that were overridden, Liberty identified two types of error code override issues:

- Liberty found an example of a service order in which Qwest applied an error code override to a legitimate mismatch. In this instance, Qwest correctly applied the

¹¹⁶ Interview #20, July 29, 2005.

¹¹⁷ Interview #25, August 8-10, 2005

¹¹⁸ Interview #25, August 8-10, 2005.

¹¹⁹ Liberty Finding 19.

override, in accordance with its process, to allow a jeopardy notice to be sent to the CLEC indicating the need to correct an error in the LSR. However, Qwest failed to cancel the order when it did not receive from the CLEC the expected supplemental LSR correcting the error. Because an override had already been issued for that error code, Qwest improperly counted the service order as accurate in PO-20 processing. In fact, this was a legitimate LSR/SO mismatch that was not corrected.¹²⁰

- Liberty identified a number of examples of improper error code overrides caused by human error.¹²¹ The service orders were improperly counted as accurate in PO-20 processing. In fact, these were legitimate LSR/SO mismatches that were not corrected.

Liberty addresses both of these issues in the Findings and Recommendations section of this report.¹²²

The SOV software did not cause the improper error code overrides; in fact, SOV appears to correctly identify the mismatches. Qwest personnel input the overrides. The RRS reporting software assumed the overrides were correct, and treated the corresponding service orders as accurate in calculating PO-20.

SOV to PANS

SOV is a very recently developed system designed specifically to determine the degree to which Qwest accurately processes those LSRs that are electronically submitted and manually processed by Qwest. The SOV logical data model consists of six tables.

Qwest pulls data daily (with the exception of Sunday) from the SOV Oracle database to PANS, which is an Oracle to Oracle transfer. The process only retrieves new records based on the process date. PANS appends or inserts the new data into the appropriate PANS Oracle tables; it does not update previously pulled data. PANS completely replaces the reference table of PIA codes daily. The Oracle tables in PANS are a one-to-one match with the tables pulled from SOV. Qwest also performs an Oracle to SAS transformation on a daily basis, combining the tables in such a way as to prevent loss of records. Because the volume of data is considerably smaller, there is no "smart processing" necessary as was implemented in other source system to PANS processes.

Qwest performs no data transformations on the data from SOV. Qwest does, however, add one new field, the insert date, to each table, which indicates when it entered the data into that table. The process does not have any specific error detection built into it. Instead, Qwest relies on Oracle return codes. Both the daily pull process (which adds only new records based on process

¹²⁰ Interview #23, August 8-10, 2005.

¹²¹ Interview #25, August 8-10, 2005 and Interview #28, August 22, 2005. Examples reviewed by Liberty included mixing up NPA and NXX, not including NPA, improper USOCs, wrong application date, and invalid non-pub listings.

¹²² Liberty Findings 20 and 21.

date), as described above, and the primary keys in the data structure (which would cause a record to be rejected if a duplication is detected) prevent data duplication.¹²³

Liberty reviewed the audit functions Qwest uses to assure that it received all data that it should. Oracle performs the point-to-point control for the SOV to PANS process, which compares before and after counts of records transferred from SOV.¹²⁴ Qwest indicated that if it encountered a record from SOV that PANS could not process, then the system would alarm and the load process would fail. Qwest retains SAS data for 16 months and retains the Oracle data for six years.¹²⁵

Liberty was satisfied that Qwest's process for extracting data into PANS from SOV was adequate to ensure that it retrieved all relevant data for the measures, and that the data did not change. Liberty was also satisfied that Qwest had implemented adequate controls over that process.

PANS to RRS

As part of its data validation, Liberty examined the process and code used by RRS to extract data from PANS on a daily basis for the PO-20 measures. Qwest uses this program to create a rolling Ad Hoc file for the measure using data from the SOV database in PANS. Liberty also examined the separate SAS program that RRS uses to create the monthly locked Ad Hoc file. Using this SAS program, RRS selects those records from the rolling Ad Hoc file that have a completion date within the reporting month.

Qwest stated that it pulls three months of data (the current reporting month, as well as one month before and one month after the reporting month) on a daily basis to create the rolling Ad Hoc file. Qwest pulls data from three PANS database tables that originated in the SOV system. Qwest also pulls data from the Call Center Database, from the RSOR Ad Hoc files¹²⁶ and the prior month's OP-5 Ad Hoc files. There are several macros that merge data from the separate pulls based on key fields.

During the SOV data pull, Qwest excludes orders that are not classified as "completed," buckets the products into the proper product reporting categories, and removes duplicate LSR/service order combinations. Qwest pulls fields representing the PIA codes, fields that contain information documenting manual error code overrides, as well as other fields necessary to later match and combine the records properly.

From RSOR monthly Ad Hoc files, Qwest pulls six months' worth of service order due dates and the necessary matching fields. Qwest pulls the OP-5B flag from the prior month's OP-5 Ad Hoc file and the necessary fields to match them.¹²⁷ Liberty checked to see that the service orders that were marked with an OP-5 miss flag were indeed misses in the OP-5 Ad Hoc file.

¹²³ Interview #18, July 19, 2005.

¹²⁴ Response to Data Request #211.

¹²⁵ Interview #18, July 19, 2005.

¹²⁶ Response to Data Request #97.

¹²⁷ Interview #10, June 17, 2005.

Qwest pulls call center ticket data from the call center database. Qwest uses these call center tickets to determine whether a CLEC has notified Qwest of an LSR/service order mismatch for any service order within certain time parameters. A ticket would mean a failure regardless of whether any field with a mismatch is part of a particular phase of the implementation of PO-20. Liberty examined the Call Center Procedures document that described how to populate the product reason description and sub-product code fields of the call center database.¹²⁸ Liberty also obtained a file with eligible call center tickets and compared LSR numbers to verify that all matching tickets were present in the PO-20 Ad Hoc.¹²⁹ Liberty found a discrepancy that it addresses in the Findings and Recommendations section of this report.¹³⁰

After reviewing the SAS programs with Qwest, Liberty was satisfied that Qwest's process for extracting data from PANS was adequate to ensure that it retrieved all relevant data for the measure, and that the data did not change with the exception of call center tickets issue described above.

RRS Processing for PO-20

The key data fields in the PO-20 Ad Hoc file are state, CLEC ID, product type, request type, PIA codes, OP-5 status, error codes, error override codes, sequence number, IMA version indicators, and exclusion code. Qwest assigns the exclusion code in RRS, and uses it to identify which records to exclude from the measure; Qwest includes only those records with an exclusion code of "0" in reported results.

Qwest initializes all records with a default exclusion code value of "0". Qwest then calculates a variety of exclusion codes in RRS that it later uses to screen out specific service orders from the PO-20 measure. The table below lists these codes.

Exclusion Code	Exclusion Type
1	Test CLEC data
2	Invalid state code
17	Blank/Null Due Date
119	Counted as OP-5 Misses

Qwest also excludes cancelled service orders by only downloading completed orders into the Ad Hoc file from PANS.¹³¹ Although not specifically stated in the PID language, Qwest makes an exclusion for test CLECs, which Liberty finds to be reasonable.

Note 1 of the PO-20 PID lists an additional requirement which could be considered an exclusion. It states, "[t]o be included in the measurement, service orders created from CLEC LSRs must be received and completed in the same version of IMA-GUI or IMA-EDI." Note 1 was to be effective for PO-20 Phase 1 and beyond. Liberty determined that Qwest has not yet implemented

¹²⁸ Response to Data Request #253.

¹²⁹ Response to Data Request #252.

¹³⁰ Liberty Finding 22.

¹³¹ Interview #10, June 17, 2005

this requirement.¹³² Liberty addresses this issue in more detail in the Findings and Recommendations section of this report.¹³³

As part of its data validation efforts, Liberty focused on the December 2004 monthly Ad Hoc files, which Qwest uses for the calculation of results. Liberty reviewed all transactions from the Ad Hoc file that met the high-level criteria for inclusion within PO-20. Each of the original three Bell Operating Company Regions served by Qwest were represented in the analysis. The monthly Ad Hoc files contain both original and derived data fields. In order to substantiate the programming logic it examined earlier, Liberty reviewed the derived data fields needed for the calculation of the PO-20 measure results to verify RRS calculated them correctly from the source data.

As part of RRS processing, Qwest calculates the number of business days between when the call center ticket was received and the order due date. Qwest also determines which error codes resulting from mismatches identified by the SOV system can be legitimately cancelled out due to a PIA. Because a single order can have multiple error codes and multiple PIAs, all have to be compared. If any error code does not have a matching PIA, it will be counted as a miss subject to other exclusions. Liberty obtained a copy of the PIA/error code reference table in effect for SOV during December 2004.¹³⁴ Qwest RRS software makes the final met/miss determination for each service order. When an order has a call center ticket on it within the defined time interval, Qwest counts it as a miss even if SOV determined that the order passed all criteria. At this stage, Qwest also applies any manual error code overrides. As with PIAs, there must be an override for every SOV error code in order for the service order to be counted as accurate. Qwest applies a slightly different logic set to calculate different phases of PO-20.¹³⁵ Qwest identifies the last service order of each LSR, because that service order is the only one to be counted in the PO-20 calculation. Using the PO-20 December Ad Hoc file, Liberty confirmed that all of these calculations were performed correctly.¹³⁶

Liberty examined the method that Qwest uses to calculate the PO-20 sub-measures. Qwest counts all eligible service orders for the denominator. Qwest counts the number of accurate eligible service orders for the numerator. Totals are determined by state and by CLEC. The PID defines two product buckets that are created by mapping the product_cat field. Liberty discovered that Qwest has been omitting the UNE-P (Centrex 21) product from the PO-20 results beginning with the December 2004 reporting month. When implementing the code changes to exclude products that are part of the QPP commercial agreements (*i.e.*, QPP_POTS, QPP_CTX21), Qwest omitted UNE-P (Centrex 21) products that were not part of the commercial agreements.¹³⁷ Qwest properly included the UNE-P (POTS) product; however, Qwest should also include the UNE-P (Centrex 21) products in the Resale and UNE-P (POTS

¹³² Response to Data Request #157.

¹³³ Liberty Finding 9.

¹³⁴ Response to Data Request 261.

¹³⁵ The phases are differentiated primarily by the set of error codes to be considered.

¹³⁶ Interview # 22, July 29, 2005.

¹³⁷ Response to Data Request #185.

and Centrex 21) reporting category. Liberty addresses this issue in the Findings and Recommendations section of this report.¹³⁸

Liberty concluded that Qwest's method for calculating this measure conforms to the PID with the exception of a few issues that are addressed in the Findings and Recommendations section of this report.

Qwest listed a number of changes in 2004 to the PO-20 processing in the revision history of the programming code. Qwest modified code to fix a situation in which they were getting false misses on rare occasions when it received a trouble ticket before an order was even issued. Qwest modified code to account for commercial agreements and the QPP product, as is the case with other measures. Qwest modified code for the implementation of Phase 2 of the PO-20 measure. Qwest also changed the code to start pulling data from PANS daily, instead of monthly, to allow for internal Qwest monitoring of measure performance. Qwest identified one system change implemented between January 2004 and January 2005 that required a rerun of PO-20 results originally published in 2004.¹³⁹ Qwest restated its May and June 2004 results for PO-20 when an internal Qwest analysis identified nine Universal Service Order Codes (USOCs) missing from RRS tables.¹⁴⁰ Liberty found no issues with the coding changes with the exception of the UNE-P Centrex 21 issue discussed above.

Liberty also reviewed the December 2004 Ad Hoc Master File created by Qwest. Liberty reviewed the records in this file for the PO-20 disaggregations, and found that they accurately captured the results that Liberty recalculated for CLEC aggregate results.

Liberty reviewed the documentation¹⁴¹ of the processes that Qwest uses to calculate the PO-20 results and found it to be generally useful. However, Liberty found that the documentation provided no description for the product code field used in the formulas for PO-20, or for some derived fields (*e.g.*, last order and phase2) important to the calculation of PO-20.¹⁴² Also, the RRS documentation did not list test CLEC as a common exclusion for PO-20.¹⁴³

Replication

Liberty's objective for the PO-20 replication was to recalculate and reproduce Qwest's reported results to confirm that they were calculated comprehensively and accurately. Liberty used the data found in the RRS December PO-20 Ad Hoc data set, but developed its own code to perform the replication.

Liberty's PO-20 replication efforts focused on reproducing the December 2004 reported results for the two product disaggregations associated with this performance measure. Liberty replicated

¹³⁸ Liberty Finding 11.

¹³⁹ *Summary of Notes for Qwest Regional Performance Results Report*, dated January 24, 2005, published on Qwest's website.

¹⁴⁰ Response to Data Request #91.

¹⁴¹ Chapter 17 of Regulatory Reporting Systems Documentation, December, 2004.

¹⁴² Qwest provided updated documentation to rectify the product code omission in response to Data Request #61.

¹⁴³ In response to Data Request #95, Qwest provided an update to chapter 17 of the RRS documentation that contained a revision to the common exclusion section to include test CLEC.

CLEC aggregate results for each state. Additionally, Liberty replicated a sample of CLEC-specific results using a different CLEC for each of the 13 states. Liberty successfully replicated Qwest's December 2004 state-specific reported metric result for PO-20 for the CLEC aggregate and for selected CLECs.

F. OP-5A – New Service Installation Quality Reported to Repair

1. Background

The OP-5A performance measure reports the percentage of inward line service orders that are free of trouble repair reports within 30 calendar days of installation completion. Repair trouble reports are defined as CLEC or retail customer notifications to Qwest of an out-of-service or other service affecting condition for which Qwest opens a repair ticket in its maintenance and repair management and tracking operations support systems after service order completion. Trouble reports received by Qwest prior to service order completion are considered “provisioning trouble reports” and are included in the OP-5B results. Inward line service orders are defined as orders for new service installation and change orders for additional lines or circuits. Orders for conversion activity (*i.e.*, retail to CLEC, CLEC to CLEC, and the same CLEC converting from one product to another) are also considered to be inward activity and included in the calculation for OP-5A.

Versions 5.0a through 8.0 of Qwest's 14-state 271 PID list the following exclusions for OP-5A:

- Repair trouble reports attributable to CLEC or coded to non-Qwest reasons as follows:
 - For products supported by Mechanized Trouble Analysis System (MTAS) repair trouble reports coded to disposition codes¹⁴⁴ for:
 - Customer Action
 - Non-Telco Plant
 - Trouble Beyond the Network Interface
 - Miscellaneous – non-dispatch, non-Qwest (includes Customer Provided Equipment (CPE), Customer Instruction, Carrier, Alternate Provider)
 - Reports from other than CLEC/customer that result in a charge if dispatched.
 - For products supported by Work Force Administration (WFA) repair reports coded to codes for:
 - Carrier Action
 - CPE

¹⁴⁴ The Qwest technician uses a disposition code when closing a trouble report to specify where in the network the trouble was found or whether the ticket was closed as a test OK, no trouble found.

- Commercial power failure
- Customer requested service order activity
- Other non-Qwest troubles
- Repair reports coded to disposition codes for referral to another department (*i.e.*, for non-repair ticket resolutions of non-installation related problems, except cable cuts, which are not excluded).
- Repair trouble reports related to service orders captured as misses under measurements OP-13 (Coordinated Cuts Timeliness) or OP-17 (Local Number Portability Timeliness)
- Subsequent repair trouble reports of any trouble on the installed service before the original repair trouble report is closed
- Service orders closed in the reporting period with Application Dates earlier than eight months prior to the beginning of the reporting period
- Information tickets generated for internal Qwest system/network monitoring purposes
- Disconnect, From,¹⁴⁵ and Record order types
- Records involving official Qwest company service
- Records missing data essential to the calculation of the measurement as defined by the PID.

The PID versions 5.0a through 8.0 provide the following formula for the calculation of the OP-5A results:

$$\frac{\{(Number\ of\ inward\ line\ service\ orders\ completed\ in\ the\ reporting\ period) - (Number\ of\ inward\ line\ service\ orders\ with\ any\ repair\ trouble\ reports)\}}{(Number\ of\ inward\ line\ service\ orders\ completed\ in\ the\ reporting\ period)} \times 100.$$

Qwest reports OP-5A one month in arrears (*i.e.*, the results first appear in reports one month later than the results for other OP measures that are not reported in arrears) to allow for the 30 day period post service order completion to determine whether the line/circuit experienced a trouble report. As such, by way of example, service orders completed in October 2004 would be reported with the November 2004 OP-5A results.

The report comparisons for OP-5A are CLEC aggregate, CLEC-specific and Qwest retail. Qwest reports results at an individual statewide level for each of the 14 states in the Qwest service area, as well as at a regional level reflecting the 14-state aggregate results. Qwest disaggregates the OP-5A results into 36 unique product groups. The standard for each of these product groups is parity with Qwest retail service.¹⁴⁶ The retail products used as the standard are not mutually

¹⁴⁵ A "From" order is the disconnect portion of the order typically associated with a customer move of service from one premises to another.

¹⁴⁶ Qwest makes the following exceptions to this standard: Loop Splitting, Sub-Loop Unbundling, Dark Fiber Loop, Dark Fiber Interoffice Facilities, Enhanced Extended Link (EEL) –DS0 level and EEL above DS1 level. Qwest reports all of these products as "Diagnostic" measures that currently have no performance standard.

exclusive and often serve as the performance analog for multiple CLEC products. As such, a single retail order/trouble report can be counted as the retail analog toward numerous CLEC products.

In version 7.0 of Qwest's PID, effective July 2004, Qwest dropped the language "with 'I' and 'T' action coded line/circuit USOCs" from the Description section of the OP-5 performance measure in connection with defining a change order representing inward activity. Qwest explained that it dropped the "I" and "T" action code reference from the definition because the parties associated with the Long Term PID Administration (LTPA) agreed to replace repeated definitions of inward activity where they appeared in the PID with a hyperlink that takes the reader to the definition section of the PID that contains the definitional details. This change in language was intended to reduce repetition of definitional elements and did not represent a definitional modification.¹⁴⁷

Version 5.0a of the PID (effective January and February 2004) listed Retail –DS1 as the OP-5A retail standard for the Enhanced Extended Link (EEL) – DS1 product. In subsequent versions of the PID, Qwest changed the standard for this product to Retail DS1 – Private Line. Qwest stated that the parties in the LTPA agreed upon "the change from 'Retail DS1' to 'Retail DS1 Private Line' and intended the change to simply clarify that the retail analog was Retail DS1 Private Line. For this reason, references to 'Retail DS1' in version 5.0a of the PID and 'Retail DS1 Private Line' in subsequent PID versions identify the same product."¹⁴⁸

In version 8.0 of the Qwest PID, the Line Splitting product changed from a standard of "diagnostic" to a standard of "parity with retail Qwest DSL" for the OP-5A measure. Additionally, version 8.0 of the PID added the xDSL capable loop as a product disaggregation for OP-5A. This product also has a standard of "parity with retail Qwest DSL."

During 2004, OP-5A was included in the QPAPs of all states.¹⁴⁹

2. Analysis and Evaluation

Qwest reports the OP-5A measure on a service order level. The OP-5A measure requires both service order and trouble ticket data for the calculation of the results. The source data needed for the calculation of the OP-5A performance measure comes from three legacy support systems, the Service Order Processor (SOP), Loop Maintenance Operating System (LMOS), and Work Force

¹⁴⁷ Response to Data Request #26.

¹⁴⁸ Response to Data Request #27.

¹⁴⁹ OP-5A was first introduced in PID version 5.0a as a replacement for the old OP-5 measure. As Qwest noted in response to Data Requests #206, #248, and #274, Arizona did not approve PID version 5.0a and subsequent PID versions for inclusion in the Arizona QPAP until a February 15, 2005 Arizona Corporation Commission Order. Minnesota has not yet approved PID version 5.0a or subsequent PID versions. Nevertheless, Qwest noted in response to Data Request #274 that "[b]ecause OP-5A was a replacement for and improvement of OP-5, Qwest implemented OP-5A in all states beginning in November 2003, except for EEL_DS1, which was an additional disaggregation in the revised OP-5A that was not in the former OP-5." Because Line Splitting and xDSL Loops were added to the QPAP with PID version 8.0, these disaggregations were also missing from the Arizona and Minnesota QPAPs during 2004.

Administration – Control (WFA-C). Qwest collects data daily from these legacy systems and stores them in databases within PANS. To prepare data for the calculation of the provisioning measures, RRS extracts the service order data from the RSOR database in PANS. To prepare data for the calculation of the maintenance and repair (M&R) measures RRS extracts the trouble report data from the MTAS and WFA-C databases in PANS. Using these data, Qwest creates rolling Ad Hoc files in RRS daily. Qwest later generates a monthly “locked” snapshot of each of these rolling Ad Hoc files, which it then uses to calculate reported results for various provisioning and M&R measures.

RSOR to PANS

The description of the service order data flow from the SOP/RSOR source systems to PANS can be found in Section IV C of this report.

MTAS to PANS

Trouble ticket data for non-designed services originate in LMOS. Trouble ticket data flow daily from LMOS to MTAS, an intermediate database for the collection and storage of trouble ticket data on non-design services. The MTAS database stores data for 100 days past trouble ticket completion.¹⁵⁰ PANS receives a file from MTAS six days per week.¹⁵¹ This file is based on the trouble reports that were closed in MTAS during the previous day. Qwest includes trouble reports closed on a Saturday or a Sunday in the Monday MTAS file.¹⁵²

PANS does not exclude any data from MTAS. It pulls in all trouble ticket records closed from the previous day. However, if PANS finds that it has received a field value that is not compatible with the expected format (*e.g.*, all alphas when a numeric values were expected) PANS will halt processing and obtain a new file from MTAS to correct the problem. Qwest copies the data from MTAS into an Oracle table in PANS with the same name. Qwest also creates an MTAS data set in SAS, which Qwest uses downstream for measurement results processing, from the Oracle table. PANS retains the SAS Oracle data for five years. PANS stores the SAS data for 16 months.¹⁵³

PANS does not transform any of the original data it receives from MTAS. However, PANS derives 14 new fields in the Oracle data set based on the original data. Of these 14 new fields only one, the subsequent trouble report indicator flag, is used in the calculation of the OP-5A measure.¹⁵⁴ Qwest uses most of the other derived fields for internal administrative purposes only, not for the calculation of the performance measures.

Qwest uses an internal audit process to ensure that PANS received all the records needed from MTAS to calculate the performance results. Qwest's “point-to-point” control for the MTAS to PANS data exchange uses a “control type 2” process. This control type involves providing a header on the transmission record coming from MTAS with an indicator of how many total

¹⁵⁰ Response to Data Request #15.

¹⁵¹ PANS does not receive a file from MTAS on Sundays.

¹⁵² Response to Data Request #193.

¹⁵³ Interview #19, July 20, 2005.

¹⁵⁴ Response to Data Request #194. Qwest also uses this field in the calculation of the MR-9 measure.

records are associated with the data transfer. PANS will subsequently check the records received against this record count indicator to make sure that the counts match.

WFA-C to PANS

Qwest obtains trouble report data on design services from its WFA-C legacy source system. PANS receives two files from each of the regional WFA-C systems on a daily basis (six files total).¹⁵⁵ PANS merges the two files and only pulls in records with an update date from the previous day. The combined data files are then transferred over to the PANS warehouse server where Qwest loads them into an Oracle database. Qwest then uses the Oracle tables to create the WFA-C SAS data set in PANS. The SAS data set is used downstream for measurement results processing. Qwest retains the data in PANS for a minimum of 36 months.

PANS does not exclude any data from WFA-C. It pulls in all records that have the previous day's date in the last update field. However, unlike the non-designed services administered out of the LMOS system, the designed services trouble tickets may get updated even after the trouble ticket has been closed. If PANS already has a record for a trouble report and gets an updated record based on the last update date, it will completely overwrite the previous record it had on that trouble report with the updated data. In cases where PANS rejects a WFA-C record because of a format problem, Qwest goes back to the source data to have an entire new file transmitted to correct the problem.

The only source data transformations performed by PANS are conversion of the Julian date received from WFA-C to a month/day/year format and conversions of characters such as dashes between telephone numbers to spaces. PANS derives four new fields from the source data it receives from WFA-C. However, Qwest uses none of these fields in the calculation of the OP-5A measure.¹⁵⁶ Qwest uses the same point-to-point internal audit process described in the MTAS to PANS section above to ensure that PANS received all the records needed from WFA-C to calculate the performance results.

Based on its review of the source system to PANS data flow and quality check process with Qwest, Liberty was satisfied that Qwest's process for extracting data into PANS was adequate to ensure that it retrieved all relevant data for OP-5A, and that the data did not change. Liberty was also satisfied that Qwest had implemented adequate quality controls over that process.¹⁵⁷

PANS to RRS

Because it reports the OP-5 sub-measures using service order data that is one month in arrears, for processing efficiency Qwest uses the RSOR Ad Hoc file that was created from PANS data the previous month for the calculation of the OP-3 (Installation Commitment Met), OP-4 (Installation Interval), and OP-6 (Delayed Days) measures. To create the record-level Ad Hoc file in RRS used for the calculation of the OP-5 sub-measures, Qwest combines the data from the RSOR Ad Hoc file created the previous month for these three other OP measures with the MTAS and WFA-C Ad Hoc files created the previous month and the current month for the M&R

¹⁵⁵ Qwest has a separate WFA-C system in each of its three regions.

¹⁵⁶ Interview #19, July 20, 2005 and response to Data Request #199.

¹⁵⁷ Interview #16, July 11, 2005 and Interview #19, July 20, 2005.

performance measures.¹⁵⁸ To complete the OP-5 Ad Hoc data set, RRS retrieves from PANS the line/circuit level data associated with the service orders completed during the previous month.¹⁵⁹ Qwest creates the Ad Hoc file used for the calculation of all the OP-5 sub-measures only once per month in RRS.

For its data integrity review of OP-5A, Liberty focused on the OP5O Ad Hoc file that is created in RRS for the calculation of the OP-5A measure.¹⁶⁰ Liberty examined the SAS program in RRS used by Qwest for the creation of this monthly Ad Hoc file by pulling data from the RSOR Ad Hoc files used for the calculation of the three OP measures identified above and from the MTAS and WFA-C Ad Hoc files used for the calculation of the M&R measures. Liberty also reviewed the SAS program code that Qwest uses to pull in the line/circuit level data from PANS and analyzed how these data are combined with the order level data. Liberty did not review the code used by Qwest to create the RSOR or WFA-C Ad Hoc files because the Qwest creates these files primarily for the calculation of measures that were not within the scope of this audit. Liberty reviewed the code used to create the MTAS Ad Hoc file in RRS in conjunction with the audit of the MR-9 measure.

After reviewing the SAS programming with Qwest, Liberty was satisfied that Qwest's process for the creation of the OP5O Ad Hoc file by pulling service order and trouble ticket level data from the previously created RRS Ad Hoc files and the line level data from PANS was adequate to ensure that it retrieved all the relevant data for the calculation of the OP-5A measure and that this data did not change during the process.¹⁶¹

RRS Processing for OP-5A

The SAS program used to create the OP5O Ad Hoc file calculates certain derived fields that are critical to the calculation of the OP-5A measure. Specifically, the function of each of these derived fields is as follows:

- A flag to indicate when an order was scored as a miss on the OP-13 measure,
- A flag to indicate when an order was scored as a miss on the OP-17 measure,
- A flag to indicate when a trouble report from WFA-C was closed to a CLEC trouble code,
- A flag to indicate that the ticket should not count as an OP-5 miss,
- A flag to identify that an order is the original order and should be counted for the OP-5 measure,
- A flag to identify the orders that should be included in the numerator of the OP-5A measurement calculation.

¹⁵⁸ Qwest uses two months' worth of M&R data (current month and previous month) to ensure that all trouble reports within 30 days of service order completion are captured for the measurement calculation.

¹⁵⁹ Response to Data Request #17. The line/circuit level data must be retrieved from PANS because Qwest uses the line/circuit level information for the calculation of OP-5 sub-measures, but not for the calculation of OP-3, OP-4 or OP-6.

¹⁶⁰ Response to Data Request #10. The Ad Hoc created for the calculation of the OP-5 sub-measures that are reported at the order level (OP-5A, OP-5B and OP-5T) is known as the OP5O file.

¹⁶¹ Interview # 11, June 14, 2004 and Interview #14, June 27, 2005.

The program also checks for specific exception conditions that apply to the OP-5A measure and assigns a value in one of three exclusion code fields when these conditions exist. Qwest also uses a look-up reference table to determine whether the trouble report resolution was attributed to Qwest or to the CLEC based on the disposition code (from MTAS) or the trouble code (from WFA-C) that is used by the Qwest technician when closing out the trouble report. Trouble reports attributed to Qwest are those troubles that were found to be caused by a fault in the Qwest network (*e.g.*, a central office trouble or an outside plant facility trouble), or by troubles that were found to be test OK/no trouble found. Qwest attributes to the CLECs trouble reports cleared for reasons other than a trouble within the Qwest network or a test OK (*e.g.*, a trouble beyond the network interface or a trouble in customer premises equipment).

Qwest calculates a variety of exclusion codes in RRS that it uses to exclude specific orders from the OP-5A measure calculation; Qwest only includes those records with an exclusion code of “0” in the report results. The exclusion codes that can be found in the OP50 Ad Hoc file in RSS that apply to the OP-5A measure are shown on the following table:

Exclusion Code	Exclusion Type
44	Order application date is more than 8 months prior to the beginning of the reporting period.
109	Trouble report received before completion of the service order
110	Trouble report is over 30 days after the order completion date
111	Product on order and trouble report don't match (Line Sharing)
112	Product on order and trouble report don't match (MBIT)
113	Order was counted as a miss for OP-17
114	Order was counted as a miss for OP-13

Qwest uses these exclusion codes to identify records that it will not count toward the calculation of the OP-5A performance and payment results. Any service order record assigned one of these exclusion codes will not be included in the results calculation for the OP-5A measure.

Liberty reviewed the logic used by Qwest to set the exclusion codes in the RRS program. With the exception of the one finding summarized below and detailed in the findings section of this report, Liberty was satisfied that Qwest set the exclusion codes in accordance with the PID.

The key data fields in the OP50 Ad Hoc file used for the calculation of the OP-5A measure are: state, exclusion code, CLEC ID, product ID, the first order flag, the do-not-count flag, and the CLEC trouble-identification flag.¹⁶² Liberty examined the method that Qwest uses to populate these fields and to calculate the OP-5A measurement results. To calculate the denominator of the OP-5A measure, Qwest counts the number of service order records that contain an exclusion

¹⁶² Like the “WCLEC CT” field used for designed service troubles reported in WFA-C, Qwest uses the “MCLEC CT” field to indicate that a non-designed service trouble report from MTAS was closed to a CLEC disposition code. However, unlike the WFA CT field, which is a derived field in the OP50 file, the MCLEC CT field is an original field value from the source file.

code of “0” and a first order value of “1.”¹⁶³ The numerator for the OP-5A measure is determined by subtracting from the denominator all records not excluded based on the list of exclusions provided above with troubles closed out to a disposition code that attributes the trouble to Qwest. Qwest performs this calculation at both a state and CLEC-specific level. Qwest uses the same formula to calculate the retail results for the parity performance standard.

With the exception of three findings identified by Liberty regarding Qwest's OP-5A calculation process, Liberty concluded that Qwest's method for calculation of the OP-5A measure conforms to the PID requirement. Liberty identified three issues; specifically, Qwest's calculation process may at times ignore troubles on auxiliary lines, Qwest did not include all the products that should roll up to the “DS3 and Above” product disaggregation, and Qwest did not use the correct retail product as the parity standard for the wholesale “Unbundled Non-Loaded 2-Wire Loop” product disaggregation. Liberty provides a detailed description of these three issues in the Findings and Recommendations section of this report.¹⁶⁴

Liberty focused its data review on the January 2005 OP50 Ad Hoc file used by Qwest for the calculation of its December 2004 OP-5A results.¹⁶⁵ Liberty reviewed wholesale and retail transactions from this file using a random sample of approximately 1,000 transactions drawn from each of the original three Bell Operating Company regions served by Qwest.¹⁶⁶ These transactions contained both original and derived data fields. In order to substantiate the accuracy of the programming logic it examined earlier, Liberty reviewed each of the critical data fields, both derived and original, needed for the calculation of the OP-5A measure results to verify that the fields were being calculated correctly based on the source data and, when appropriate, a look-up table.

In addition to the critical data field values, Liberty focused this portion of its review on the exclusion codes derived by Qwest in the OP50 Ad Hoc file. Liberty found that all the critical data fields were being properly calculated. Liberty also found that the exclusion codes were accurately derived. However, Liberty did find that Qwest was excluding trouble reports for the OP-5A calculation that did not correspond to a valid exclusion documented in the PID. Liberty addresses this issue in more detail in the Findings and Recommendations section of this report.¹⁶⁷

Qwest implemented four programming changes to RRS during 2004 that impacted how it calculated OP-5A, but did not require a rerun of the results. The first of these changes, implemented in January 2004, fixed a programming problem that involved how Qwest treated Megabit (MBIT) orders for exclusion. The second, implemented in February 2004, added a variable to the WFA-C and RSOR merge process by including state in the merge. Prior to this

¹⁶³ A value of “1” in the first order field indicates that this is the original service order issued to satisfy a specific inward service request. This field ensures that Qwest does not double count service orders in its OP-5A results calculation by omitting any subsequent order activity on the original service order.

¹⁶⁴ Liberty Findings 1, 4, and 7.

¹⁶⁵ The January file is used because the OP-5A measure is calculated one month in arrears.

¹⁶⁶ The sample used included transactions from each of the 13 states involved in the audit. It also included 28 of the 36 OP-5A product disaggregations. Some products were not included due to the lack of volume for the product in December 2004.

¹⁶⁷ Liberty Finding 2.

change the merge was based on region and order number only. The third change, implemented in March 2004, added exclusion code type 44 to identify orders that had an application date that was greater than eight months prior to the reporting period. The final RSOR change, implemented in April 2004, added the exclusion code 44 for E911 order types.¹⁶⁸

Additionally, Qwest identified two changes that required a rerun of the originally published OP-5A results. The first of these changes involved a modification to the RRS code to ensure proper product identification associated with retail to UNE-P conversions in Washington and Oregon. This change required a rerun of the January, February, and March 2004 OP-5A results. The second change involved adding missing USOCs associated with the MBIT product to the USOC look-up table. This change required a restatement of the OP-5A results for May and June 2004.¹⁶⁹ Liberty verified that the RRS coding associated with all of these changes was in compliance with the PID requirements.

Liberty also reviewed the January 2005 Ad Hoc Master Files created by Qwest.¹⁷⁰ Liberty reviewed the records in this file for the OP-5A measure and found that the payment input record for the PAP was missing a number of products that had performance results reported in January 2005. Specifically, Liberty found that the payment record was missing the Line Splitting and the Unbundled xDS1 Loop products in both Arizona and Minnesota. The payment input record was also missing the Enhanced Extended Loop (EEL) – DS1 Capable product in eight states.¹⁷¹ However, Liberty did find the performance results for all of these product and state combinations in the Ad Hoc master file. Qwest explained that neither Arizona nor Minnesota approved PID version 5.0a, or any subsequent PID versions during 2004. As such, Qwest did not include the Line Splitting, Unbundled xDSL Loop, and the DS1 EEL products in the payment record for these two states.¹⁷² Additionally, Qwest explained that when it discovered that it had not implemented OP-5A EEL-DS1 as specified in PID version 5.0a, Qwest implemented the product retroactively, and made payments (with interest) to affected CLECs.¹⁷³ Qwest explained that it reran the calculations from December 2004 through May 2005 with its March 2005 release, and it also reran the calculations from December 2003 through November 2004 with its July 2005 release.¹⁷⁴ This issue is addressed in the Findings and Recommendations section of this report.¹⁷⁵ With this exception, Liberty found that the Master File and payment input records accurately captured the CLEC aggregate and retail results that Qwest reported. The records also matched the results that Liberty recalculated in each state.

¹⁶⁸ Response to Data Request #132.

¹⁶⁹ Response to Data Request #91.

¹⁷⁰ Responses to Data Requests #168 and #235.

¹⁷¹ The eight states where the DS1 EEL product was missing from the payment record were: Arizona, Idaho, Minnesota, Montana, Nebraska, New Mexico, Oregon, and Utah.

¹⁷² Responses to Data Requests #248 and #274. PID version 5.0a included DS1 EELs. PID version 8.0 added Line Splitting and xDSL Loops.

¹⁷³ The Washington QPAP is an exception to this retroactive implementation of the EEL DS1 product. Qwest included this product in the Washington QPAP with the implementation of PID version 5.0a. Liberty verified that the EEL DS1 results were included in the payment records for Washington in 2004.

¹⁷⁴ Response to Data Request #274.

¹⁷⁵ Liberty Finding 26.

Replication

Liberty's objective for the replication task area was to recalculate Qwest's OP-5A CLEC aggregate and retail reported December 2004 results for each state participating in the audit to confirm that Qwest calculated them accurately for each of the OP-5A product disaggregations. In addition to the CLEC aggregate and retail results, Liberty also recalculated the December 2004 CLEC specific results for 12 different CLECs using one CLEC per state.¹⁷⁶

Liberty wrote its own code, based on the PID, to perform its replication. Using this code, Liberty recalculated the results for the all the OP-5A product disaggregations that had order volumes associated with them using the data found in the monthly OP5O Ad Hoc file.¹⁷⁷ Liberty then compared its recalculated results with the results reported by Qwest.¹⁷⁸ Liberty successfully replicated Qwest's December 2004 state-specific reported metric results for the OP-5A measure for the CLEC aggregate, retail, and selected CLECs. Liberty also validated that, with the exception of the findings noted in the data integrity section above, Qwest was using the appropriate retail products as the parity standard for each of the OP-5A wholesale product disaggregations.

Liberty issued a general finding regarding the quality of Qwest's documentation as a result of its replication efforts.¹⁷⁹ Liberty also found Qwest's PID documentation of the parity performance standards for the OP-5A measure unclear and misleading for the wholesale unbundled loop products. Liberty addresses this issue in more detail in the Findings and Recommendations section of this report.¹⁸⁰

G. MR-9 – Repair Appointments Met

1. Background

The MR-9 measure reports the percentage of trouble reports for which Qwest met the committed repair appointment date and time. It includes all trouble reports closed during the monthly reporting period subject to the valid exclusions reflected in the PID. Versions 5.0a through 8.0 of Qwest's 14-State 271 PID list the following exclusions for MR-9:

- For products supported by MTAS, trouble reports coded with the following disposition codes:
 - Customer Action
 - Non-Telco Plant
 - Trouble beyond the Network Interface
 - Miscellaneous non-Dispatch, non-Qwest, including Customer Provided Equipment (CPE), Customer Instruction, Carrier, and Alternative Provider.

¹⁷⁶ With one exception Liberty used a different CLEC for each state.

¹⁷⁷ Response to Data Request #67

¹⁷⁸ Responses to Data Requests #146, #151, and #207.

¹⁷⁹ Liberty Finding 18.

¹⁸⁰ Liberty Finding 8.

- Subsequent trouble reports on a trouble before the original trouble report is closed
- Informational tickets generated for internal Qwest system/network monitoring purposes
- Time delays due to “no access” which Qwest excludes from repair time by using the rescheduled appointment time to determine whether the repair appointment is met
- Trouble reports on the day of installation, before the technician/installer reports installation work complete
- Records involving official company services
- Records with invalid trouble receipt dates
- Records with invalid cleared or closed dates
- Records with invalid product codes
- Records missing data essential to the calculation of the measurement.

The PID versions 5.0a through 8.0 provide the following formula for the calculation of the MR-9 results:

[(Total trouble reports cleared by appointment date and time) / (Total trouble reports cleared in the reporting period)] x 100.

Qwest reports MR-9 for CLEC aggregate, CLEC-specific, and Qwest retail. Qwest reports results at an individual statewide level for each of the 14 states in the Qwest service area, as well as at a regional level reflecting the 14-state aggregate results. Qwest disaggregates the results for the reported products by three trouble report dimensions. MR-9A provides performance results on trouble reports that involved a dispatch within a Metropolitan Statistical Area (MSA), MR-9B provides performance results on trouble reports that involved a dispatch outside the MSAs, and MR-9C provides performance results on trouble reports that did not involve a dispatch. Qwest includes in MR-9 only resale and UNE-P products, which are supported by the MTAS system, and the retail performance analogs for these products.

In PID version 6.0, effective March 2004, Qwest added the Centrex 21 product to its product reporting dimensions. Qwest indicated that Centrex 21 was never included in the aggregate Centrex product results. Qwest reported the disaggregated Centrex 21 results for the entire year of 2004 on its PDF formatted reports. Qwest and the CLECs agreed in the LTPA in December 2003 to add Centrex 21 to the MR-9 PID documentation and continue to report it on a disaggregate basis.¹⁸¹ The inclusion of this product in version 6.0 was an administrative change only, to reflect the actual product disaggregations that Qwest was reporting.

During 2004, MR-9 was not included in the QPAP of any state participating in this audit.

¹⁸¹ Response to Data Request #25.

2. Analysis and Evaluation

Qwest reports the MR-9 measure at the trouble ticket level. The MR-9 measure only tracks repair appointments met on non-designed service trouble reports. As such, all the source data needed to calculate the MR-9 measure come from MTAS.

MTAS to PANS

The data flow from the MTAS source system to PANS for the MR-9 measure is the same as described in Section IV F of this report.

PANS to RRS

Liberty examined the process and code used by RRS to extract MTAS data from PANS on a daily basis. Liberty examined the SAS program in RRS that extracts the data from PANS necessary for the calculation of the MR-9 measures.¹⁸² Qwest uses this program to create a rolling Ad Hoc file of 93 days' worth of data based on closed trouble tickets pulled from the MTAS file in PANS. Liberty also examined the separate SAS program that RRS uses to create the monthly locked MTAS Ad Hoc file that Qwest uses to calculate the results for several M&R measures as well as the OP-5 measures. Using this program, RRS selects those trouble report records from the rolling file that were closed within the reporting month.¹⁸³

After reviewing the SAS programming with Qwest, Liberty was satisfied that Qwest's process for the creation of the MTAS Ad Hoc file was adequate to ensure that it retrieved all the relevant data for the calculation of the MR-9 measure and that this data did not change during the process.¹⁸⁴

RRS processing for MR-9

In the SAS program used to create the rolling Ad Hoc file, Qwest assigns the CLEC ID using an ACNA look-up table. If the program cannot find a match, it assigns a CLEC ID of "unknown," which means that the record should be counted in the CLEC aggregate results only. The program also calculates certain derived fields critical to the calculation of the MR-9 measure. Specifically, the function of each of these derived fields is as follows:

- A two character code that identifies the state associated with the trouble ticket
- A flag to indicate whether the trouble was caused by Qwest or the CLEC
- A flag to identify whether the trouble required a dispatch out for the repair
- A two character code to indicate whether the trouble was located within or outside an MSA
- The product identification code.

The program also checks for specific exception conditions that apply to the MR-9 measure and assigns a value in the exclusion code field when these conditions exist. In addition to general CLEC and state look-up reference tables, Qwest also uses a look-up reference table to determine if a trouble report was within a MSA or was outside a MSA based on the NPA-NXX of the

¹⁸² Response to Data Request #10.

¹⁸³ Response to Data Request #11.

¹⁸⁴ Interview # 12, June 20, 2005.

telephone number associated with the line reported to be in trouble.¹⁸⁵ Qwest references a look-up reference table to determine whether the trouble report resolution was attributed to Qwest or to the CLEC based on the disposition code used by the Qwest technician closing out the trouble report.¹⁸⁶

Qwest calculates a variety of exclusion codes in RRS that it uses to screen out specific trouble reports from the MR-9 measure; only those records with an exclusion code of "0" are included in the report results.¹⁸⁷ The exclusion codes that can be found in the MTAS Ad Hoc file in RSS that apply to the MR-9 measure are shown on the following table.¹⁸⁸

Exclusion Code	Exclusion Type
1	Test CLEC
2	Invalid State Code
3	Product Not Eligible for Reporting
15	Invalid Products from NC Code Match - ISDN only
31	Invalid CLEC
36	Clear Date Prior to Trouble Received Date
99	Non-Qwest Related Trouble Reports
100	Repair Data Exclusions

Qwest uses these exclusion codes to identify records that meet the exclusion criteria specified by the PID. In the event that any of these exclusions applies to a trouble report record, Qwest does not include that record in the results calculation for the MR-9 measure.

Liberty reviewed the logic used by Qwest to set the exclusion code in the RRS program. Aside from the one finding summarized below and detailed in the Findings and Recommendations section of this report, Liberty was satisfied that Qwest set the exclusion codes in accordance with the PID rules.¹⁸⁹

The key data fields in the MTAS Ad Hoc file used for the calculation of the MR-9 measure are: state, exclusion code, CLEC ID, product ID, MSA flag, dispatch flag, missed appointment flag, and CLEC caused trouble identification.

Liberty examined the method that Qwest uses to populate these fields and to calculate the three MR-9 sub-measures. To calculate the denominator of the MR-9A sub-measure, Qwest counts the number of records that contain an exclusion code of "0", a MSA/Non-MSA indicator of "MY," representing that the trouble report was on a line within a MSA, and a dispatch flag of "Y." For the MR-9B sub-measure Qwest calculates the denominator by counting the number of records that contain an exclusion code of "0," a MSA/Non-MSA indicator of "MN," representing that the trouble report was on a line outside a MSA, and a dispatch flag of "Y." For the MR-9C sub-

¹⁸⁵ The NPA-NXX, also known as the area code and the exchange, are the first six digits of the customer's telephone number.

¹⁸⁶ Interview #12, June 20, 2005.

¹⁸⁷ Response to Data Request #55.

¹⁸⁸ The MTAS Ad Hoc file is used for the other maintenance and repair measures and it contains additional exclusion codes that do not appear on this table because they do not apply to the MR-9 measure.

¹⁸⁹ Liberty Finding 6.

measure, the denominator is calculated by counting all records that have an exclusion code of "0" and a dispatch flag of "N." Qwest calculates the numerator for all three sub-measures by subtracting from the denominator all records within each sub-measure that have a value of "1" in the missed appointment field. Qwest performs this calculation for each of the seven product disaggregations associated with the MR-9 measures, as well as at a state and CLEC level to develop state and CLEC specific results. Qwest uses the same formula calculate the retail results for the parity performance standard.

Liberty concluded that Qwest's method for calculating the MR-9 measure conforms to the PID requirements.

As part of its data validation efforts, Liberty focused on the December 2004 MTAS Ad Hoc file used by Qwest for the calculation of its MR-9 results.¹⁹⁰ Liberty reviewed wholesale and retail trouble reports from this file using a random sample of approximately 1,000 trouble reports drawn from each of the original three Bell Operating Company Regions served by Qwest.¹⁹¹ These sampled transactions contained both original and derived data fields. In order to substantiate the accuracy of the programming logic it examined earlier, Liberty reviewed each of the critical derived data fields needed for the calculation of the MR-9 measure results to verify that RRS calculated these fields correctly based on the source data and, where appropriate, a look-up table.

In addition to the derived field values, Liberty focused this portion of its review on the exclusion codes and the missed appointment flag. Liberty found that Qwest set all the derived field values and missed appointment flags properly. Liberty also found that Qwest generally derived all exclusion codes accurately. However, Liberty identified one issue in which Qwest occasionally classified retail trouble reports incorrectly as wholesale records with an unknown company identifier, and the excludes these records from the calculation of the MR-9 results. Liberty addresses this issue in more detail in the Findings and Recommendations section of this report.¹⁹²

Liberty also determined that Qwest excludes test CLEC records and records with an invalid state from the MR-9 measurement calculation.¹⁹³ While these exclusions are not documented in the PID, Liberty did not issue a finding on this practice as it believes that these transaction types are appropriately excluded from the measurement calculations. However, for the sake of accuracy, Qwest should consider updating its PID documentation to include these two exclusions.

During 2004, Qwest implemented two programming changes to RRS that impacted the way it calculated its MR-9 results, but did not result in a rerun of the results. One of these changes, implemented in December 2004, expanded the definition of dispatch-out trouble tickets. The other, implemented in August 2004, changed the product code for CLECs that opt into a commercial agreement with Qwest from UNE-P to QPP, resulting in the removal of the

¹⁹⁰ Response to Data Request #67.

¹⁹¹ The sample used included transactions from each of the 13 states involved in the audit.

¹⁹² Liberty Finding 6.

¹⁹³ Interview #12, June 20, 2005. Liberty learned that Qwest uses a pseudo state code to identify transactions for Independent Companies that operate in Qwest's territory.

transaction from the measurement calculation.¹⁹⁴ Qwest uses a reference table to identify the CLECs that have entered into a commercial agreement and the date that this agreement was effective.

Additionally, Qwest identified two changes that required a rerun of the originally published MR-9 results. The first of these changes involved a modification to the RRS code to ensure proper product identification associated with retail to UNE-P conversions in Washington and Oregon. This change required a rerun of the January, February, and March 2004 MR-9 results. The second change involved adding missing USOCs associated with the MBIT product to the USOC table. This change required a restatement of the MR-9 results for May, June, and July 2004.¹⁹⁵ Liberty verified that the RRS coding associated with these changes complied with the PID requirements. Liberty also verified that the December 2004 CLEC trouble reports identified as having a product code of QPP were accurately identified based on the commercial agreement reference table.¹⁹⁶

Liberty also reviewed the December 2004 Ad Hoc Master File created by Qwest.¹⁹⁷ Liberty reviewed the records in this file for the MR-9 sub-measures and found that they accurately captured the CLEC aggregate and retail results that Qwest reported and Liberty recalculated in each state.

Replication

Liberty's objective for the replication task area was to recalculate Qwest's MR-9A, MR-9B and MR-9C CLEC aggregate and retail December 2004 reported results for each state participating in the audit to confirm that they were calculated accurately. In addition to the CLEC aggregate and retail results, Liberty also recalculated the December 2004 CLEC-specific results for 12 different CLECs, using one CLEC per state.¹⁹⁸

Liberty wrote its own code to perform its replication based on the PID. Using this code, Liberty recalculated the results for the seven MR-9 product disaggregations for each sub-measure using the data found in the monthly MTAS Ad Hoc file.¹⁹⁹ Liberty then compared its recalculated results with the results reported by Qwest.²⁰⁰ Liberty successfully replicated Qwest's December 2004 state-specific reported metric results for MR-9A, MR-9B, and MR-9C for the CLEC aggregate, selected CLECs, and Qwest retail. Liberty also validated that Qwest used the appropriate retail products as the parity standard for each of the MR-9 wholesale product disaggregations.

¹⁹⁴ Response to Data Request #116.

¹⁹⁵ Response to Data Request #91.

¹⁹⁶ Response to Data Request #205.

¹⁹⁷ Response to Data Request #168.

¹⁹⁸ With one exception, Liberty used a different CLEC for each state.

¹⁹⁹ Response to Data Request #67.

²⁰⁰ Responses to Data Requests #57 and #125.

H. BI-4 – Billing Completeness

1. Background

There are two BI-4 sub-measures. BI-4A measures the completeness with which Qwest reflects non-recurring and recurring charges associated with completed UNE and resale services orders on the bills. BI-4B measures the completeness with which Qwest reflects the revenue for local minutes of use (MOU) associated with CLEC local traffic over Qwest's network on the bills. The PID lists no exclusions for the BI-4 measure.

The PID version 8.0 provides the following formula for BI-4A, UNE and Resale Billing Completeness:

$$[\Sigma (\text{Count of service orders with non-recurring and recurring charges associated with completed service orders on bills that are billed on the correct bill} / \text{Total count of service orders with non-recurring and recurring charges associated with completed service orders billed on the bill})] \times 100.$$

The PID provides the following formula for BI-4B, Reciprocal Compensation Billing Completeness:

$$[\Sigma (\text{Revenue for Local Minutes of Use billed on the correct bill} / \text{Total revenue for Local Minutes of Use collected during the month})] \times 100.$$

The PID defines the correct bill as the next available bill, which is the first bill that Qwest issues to the CLEC after it completed the service order.

Qwest reports BI-4A on a statewide basis for CLEC aggregate, individual CLECs, and Qwest retail. The standard for BI-4A is parity with Qwest retail. Qwest reports BI-4B on a statewide basis for CLEC aggregate and individual CLECs; the standard is 95 percent.

There were no changes to the BI-4 PID during 2004. During this period, BI-4 was included in the QPAPs of all 13 states participating in this audit.

2. Analysis and Evaluation

The data for the BI-4A sub-measure originate in Qwest's CRIS and Integrated Access Billing System (IABS) databases. CRIS and IABS generate bills based on usage, toll, customer product inventory, payments, and various types of service order activity. Qwest uses CRIS to bill CLECs for products that it traditionally offered to its own customers, and it uses IABS for products offered to long distance carriers and some wholesale customers. Qwest sends data from its source systems to PANS daily. The data for the BI-4B sub-measure originate in IABS. Qwest extracts data daily from PANS according to certain date criteria to create a 62-day rolling Ad

Hoc files in RRS.²⁰¹ Qwest generates monthly “locked” snapshots of the rolling Ad Hoc files, which it then uses to calculate reported results for the BI-4 sub-measures.

Source to PANS

As part of its data validation, Liberty reviewed the process Qwest uses to send billing source system data to PANS, and examined the level of controls over that process. Qwest extracts data every day except Monday from IABS for the BI-4A and BI-4B sub-measures. For both billing completion (BI-4A) and reciprocal compensation (BI-4B), IABS creates a data file for PANS to retrieve. Qwest sends the data via FTP into PANS. The data files from IABS are flat files, and the header and trailer records contain information on the file, including record counts. As a point-to-point control, PANS checks to see if it matches these record counts both before and after it loads the data into the PANS Oracle table. PANS retains the IABS Oracle data for a minimum of 36 months.²⁰²

Qwest inserts the IABS data for these measures into Oracle history tables in PANS.²⁰³ For both types of data, PANS adds a last update date to each record, which represents the date the record was inserted into PANS. Qwest indicated that it checked for duplicate records for both types of IABS data based on a primary key. When PANS loads the data, it checks if a record with the same primary key already exists in the history table, and if so, it causes the data insertion process to come to a halt.²⁰⁴

Liberty asked Qwest about any data transformations it applied to the IABS data. Qwest indicated that it did little or no transformation on the data. Liberty asked Qwest about how it handled records with erroneous data. Qwest noted that PANS would load the data and does not check for errors. However, if PANS encounters a field that contains a null that should contain a value, the data insertion process would fail.²⁰⁵

Liberty was satisfied that Qwest's processes for extracting data into PANS from IABS were adequate to ensure that it retrieved all relevant data for the measures, and that the data did not change. Liberty was also satisfied that Qwest had implemented adequate controls over that process.

Data from CRIS for the BI-4A sub-measure flow first to the Mechanized Administration System (MCAS) data warehouse. Qwest's three regional CRIS billing systems produce output files daily containing information on the bills it processed for one day. MCAS retrieves and interprets the data in order to produce a data record for each individual service order billed.

During this process, MCAS derives certain data fields, specifically a late bill indicator and a bill impact indicator.²⁰⁶ Qwest uses the bill impact indicator to identify non-bill impacting bills that have no recurring or non-recurring charges associated with them, such as billing address

²⁰¹ Qwest creates a new 62-day file each day, rather than appending new records to an existing file.

²⁰² Response to Data Request #169. RRS retains the data for an additional 36 months.

²⁰³ PANS also creates SAS data sets from the Oracle tables.

²⁰⁴ Response to Data Request #174.

²⁰⁵ Response to Data Request #173.

²⁰⁶ Interview #26, August 22, 2005.

changes. Qwest sets the bill impact indicator to “Y” for all new connect, disconnect, and transfer service orders, as well as for any change or record orders that have charges associated with them.²⁰⁷ Otherwise, Qwest sets the bill impact indicator to “N.” If the service order completion date is earlier than the bill date minus one month, then the service order was billed late and Qwest assigns the late bill indicator a value of “Y,” otherwise it sets it to “N.”²⁰⁸

Liberty asked Qwest if it had controls over the flow of data from CRIS to MCAS. According to Qwest, it has no firm controls in place to assure that MCAS processes all relevant service orders.²⁰⁹ Qwest does not have point-to-point controls in place for the transmission of CRIS billing information to MCAS. Liberty addresses this in more detail in the Findings and Recommendations section of this report.²¹⁰

The flow of BI-4A data from MCAS to PANS occurs throughout the day. PANS looks for a control file message from MCAS indicating that data are ready. The control file lists several fields, including the number of records the MCAS file will contain. After PANS substantiates that the data in the control file are correct, PANS creates a control file requesting a flat file from MCAS. Qwest appends the data from the MCAS flat file into a PANS Oracle table containing data from all the states, and assigns a unique record ID and last update date to each record.²¹¹ Qwest indicated that it did little or no transformation on the data, but that it did some processing to identify Qwest retail records.²¹² Qwest stated that PANS performs a routine procedure to identify if there are any duplicate records, and sends them to Qwest personnel for review.²¹³ Qwest indicated that it retained the Oracle MCAS data for 36 months in PANS.²¹⁴

Liberty asked Qwest about the controls on the MCAS to PANS process. Qwest noted that PANS checks that it had not processed the file before, and that PANS verifies the record counts in the file from MCAS.²¹⁵ Liberty asked Qwest whether it can drop any data records from MCAS, such as those with errors. Qwest indicated that if it finds an error in the data, such as a missing field, it would stop processing the data and erase whatever it had inserted up to that point. Qwest personnel assigned to PANS would then consult with MCAS personnel to seek further direction.

²⁰⁷ Responses to Data Requests #268 and #270. For the Eastern CRIS region, Qwest will also include NP orders, which deny orders or restore orders in deny status, if there are charges associated with them.

²⁰⁸ Response to Data Request #270.

²⁰⁹ Interview #26, August 22, 2005.

²¹⁰ Liberty Finding 24.

²¹¹ Although its requirements documentation indicates otherwise, Qwest no longer creates a separate SAS table for MCAS, and instead uses an Oracle table view.

²¹² Interview Request #17, July 12, 2005. If the ACNA is blank on a record and there is no CLEC ID, Qwest assigns the record a value of “USW.”

²¹³ In response to Data Request #171, Qwest stated that PANS checked for duplicates using the state, ACNA, service order number, billing telephone number, and suffix. Qwest noted that there were no duplicates in the Central and Western regions in the past year, and roughly 17 per month in the Eastern region. To place the 17 duplicates per month number in perspective, there were approximately 28,000 CRIS record in the December 2004 Ad Hoc file for one state in the Eastern region (Minnesota).

²¹⁴ Response to Data Request #170. RRS retains the data for an additional 36 months.

²¹⁵ During Interview #17, July 12, 2005, Qwest noted that it would not actually load the data if the record counts did not match.

Liberty was satisfied that Qwest's processes for extracting data into PANS from MCAS were adequate to ensure that it retrieved all relevant data for the measures, and that the data did not change. Liberty was also satisfied that Qwest had implemented adequate controls over that process.

PANS to RRS

As part of its data validation, Liberty examined the process and code used by RRS to extract data from PANS to create the Ad Hoc files.²¹⁶ Liberty examined the SAS programs in RRS that extract from PANS the data necessary for the BI-4 measures.²¹⁷ Each day, Qwest creates a rolling Ad Hoc file for the BI-4A measure using CRIS and IABS data from PANS, and a rolling Ad Hoc file for the BI-4B measure using IABS data from PANS. Liberty also examined the separate SAS programs that RRS uses to create the monthly locked Ad Hoc files for each sub-measure. Using these SAS programs, RRS selects those records from the rolling Ad Hoc files that have a bill date within the reporting month.

In the SAS programs used to create the rolling Ad Hoc files, Qwest assigns the CLEC ID using an ACNA look-up table. If the program can find no match, it assigns a CLEC ID of "unknown," which means that the record may be counted in CLEC aggregate results only. The programs also calculate certain derived fields. The BI-4A program calculates a late bill indicator for IABS records, and interfaces with a separate program that calculates a BI-4A inclusion indicator. The BI-4B program calculates total revenue.

Both programs assign the value in an exclusion code field, checking for records associated with test CLEC IDs, or for those that have invalid state codes or invalid products. The BI-4A program assigns a value in the exclusion code field for two other situations, specifically non-bill impacting service orders and records with invalid dates. The BI-4B program also assigns a value in the exclusion code field for Iowa records.²¹⁸ Qwest uses general CLEC ID, ACNA, and state look-up reference tables in the process of preparing the data for the BI-4 metric, but does not use any other measure-specific reference tables.

Liberty reviewed the SAS programs with Qwest and was satisfied that Qwest's process for extracting data from PANS was adequate to ensure that it retrieved all relevant data for the measures, and that the data did not change. Liberty noted that the program Qwest uses to generate the Ad Hoc file contained references to CRM, which is not used for the measure. Qwest stated that it would clean up the code, but that the comments had no effect on results.²¹⁹

RRS Processing for BI-4

The key data fields in the BI-4A Ad Hoc file are state, CLEC ID, product code, exclusion code, bill impact indicator, late bill indicator, and BI-4A inclusion indicator. Qwest assigns the

²¹⁶ In response to Data Request #83, Qwest confirmed that retail records for the BI-4A parity standard come from both CRIS and IABS.

²¹⁷ Liberty examined the current version of the SAS program, and discussed the changes that had been added during 2004.

²¹⁸ Iowa does not have reciprocal compensation agreements; therefore Qwest identifies any Iowa records as invalid data for BI-4B.

²¹⁹ Response to Data Request #258.

exclusion code in RRS, and uses it to identify which records to exclude from the measure; only those records with an exclusion code of "0" are included in reported results. Qwest uses the bill impact indicator to identify non-bill impacting bills that have no recurring or non-recurring charges associated with them, such as billing address changes. The value in the field is passed directly from MCAS or IABS.

MCAS assigns the late bill indicator value for CRIS records. For IABS records, Qwest calculates the late bill indicator in RRS. If the service order completion date is earlier than the bill date minus one month, then the service order was billed late and Qwest assigns the indicator a value of "Y," otherwise it sets it to "N."²²⁰ Qwest derives the BI-4A inclusion indicator field to identify those records included in the numerator and denominator of the measure. Qwest assigns records with an "N" in the late bill indicator field a "1" in this field, which means the records will be included in both the numerator and denominator (as on-time). Qwest assigns any other records a "0" in the BI-4A indicator field, which means the record will be included in the denominator only.

There are no exclusions listed in the PID for the BI-4A measure. Qwest does, however, calculate a variety of exclusion codes in RRS that it later uses to screen out specific billing records from the BI-4A measure. These records fall into two categories: those with invalid data, such as an invalid state code or a posting date that is earlier than the service order completion date, and those that Qwest believes should be excluded from the measure (*e.g.*, test CLECs, ineligible products, and non-bill impacting records). The table below lists the BI-4A exclusion types:

Exclusion Code	Exclusion Type
1	Test CLEC data
2	Invalid state code
3	Ineligible product ²²¹
26	Serviced Order posted before Service Order Completion Date ²²²
118	Non-bill impacting record

Qwest identifies those CRIS records with a bill impact indicator of "N" as an exclusion code 118. Qwest does not identify IABS records with a bill impact indicator of "N" in the same way. As such, Qwest includes non-bill impacting IABS records in reported results. Qwest acknowledged that these records should be excluded, and indicated that it opened a change request to correct the problem for the July 2005 reporting month.²²³ Qwest also stated that it would analyze the impact of the problem on 2004 reported results, but expected that a rerun

²²⁰ Response to Data Request #87. In Data Request #219, Liberty asked Qwest how it calculated this field when the service order completion date was blank, which occurred for many IABS records (which were generally otherwise excluded because of product). In its response, Qwest stated that such service orders would be marked as late.

²²¹ RRS identifies IABS records that pertain to frame relay and Unbundled Dedicated Interoffice Transport (UDIT) products, which are relevant to the measure, and assigns any other records the exclusion code of 3.

²²² This exclusion type indicates IABS records with invalid dates, *i.e.*, when the completion date is later than the posting date or the billing date, which is likely caused by a typographical error. In response to Data Request #213, Qwest stated that this error does not occur in CRIS, where order posting dates are assigned mechanically.

²²³ Response to Data Request #181 and response to Preliminary Finding #10. For the December 2004 reporting month, the error affected the state of Washington only, where one IABS record was incorrectly included in reported results.

would not be necessary.²²⁴ This issue is addressed in more detail in the Findings and Recommendations section of this report.²²⁵

Qwest also excludes records associated with wireless accounts from reported results. While Qwest does send CRIS records associated with wireless accounts to MCAS, the orders do not generate recurring or non-recurring charges, and are therefore excluded with the bill impact indicator.²²⁶ For IABS records, RRS identifies these records by their specific CLEC IDs and changes their product code to “other access,” and Qwest excludes these wireless records in its calculation of results.²²⁷

Liberty believes that the exclusions for missing or invalid data, such as bills with invalid states or products, or invalid dates, are reasonable because Qwest either cannot accurately categorize the bill or it cannot determine if the bill was late.²²⁸ Liberty also believes it is reasonable to exclude test CLEC bills and wireless bills from results. Liberty agrees that non-bill impacting records should be excluded because they have no charges associated with them, and BI-4A “measures the percentage of non-recurring and recurring charges associated with completed service orders.”

The key data fields in the BI-4B Ad Hoc file are state, CLEC ID, exclusion code, current revenue, delayed revenue, and total revenue. Like BI-4A, Qwest assigns the BI-4B exclusion code in RRS, and uses it to identify which records to exclude from the measure. Qwest receives the absolute value of current and delayed revenue directly from IABS. It calculates the total revenues in RRS as the sum of these two amounts.

The PID does not list any exclusions for the BI-4B measure. Qwest does, however, calculate a variety of exclusion codes in RRS that it later uses to screen out specific billing records from the BI-4B measure. These records fall into two categories: those with invalid data such as an invalid state code or reciprocal compensation records identified as Iowa (which does not have reciprocal compensation agreements), and those that Qwest believes should be excluded from the measure, such as test CLECs and invalid products. The table below lists the BI-4B exclusion types.

Exclusion Code	Exclusion Type
1	Test CLEC data
2	Invalid state code
3	Invalid product
102	Invalid IA Reciprocal Compensation record

Liberty believes that the exclusions for invalid data, such as bills with invalid states or invalid products, are reasonable because Qwest cannot accurately categorize the record.²²⁹ Liberty also believes it is reasonable to exclude test CLEC orders from results.

²²⁴ Response to Preliminary Finding #10.

²²⁵ Liberty Finding 10.

²²⁶ Response to Data Request #271.

²²⁷ Response to Data Request #212.

²²⁸ Liberty suggests that Qwest consider adding to the BI-4 PID exclusions the phrase it uses elsewhere: “records missing data essential to the calculation of the measurement per the PID.”

²²⁹ Liberty suggests that Qwest consider adding to the BI-4 PID exclusions the phrase it uses elsewhere: “records missing data essential to the calculation of the measurement per the PID.”

Liberty examined the method that Qwest uses to calculate the two BI-4 sub-measures. Qwest begins with the monthly Ad Hoc files that contain data on orders with bill dates within the reporting month, which is consistent with the PID definition for the denominator of both sub-measures. To calculate the denominator for the BI-4A measure, Qwest counts the number of UNE and resale service orders with an exclusion code of 0 that have a BI-4A inclusion indicator of 1 or 0 and, if CRIS records, have a bill impact indicator of Y. To calculate the numerator, Qwest counts the number of service orders in the denominator that had a late indicator of N. Qwest calculates separate results for retail (the parity standard for this measure) in a similar fashion.

To calculate the denominator for the BI-4B measure, Qwest adds the revenue associated with reciprocal compensation records with an exclusion code of 0. To calculate the numerator, Qwest sums the current revenue for the records in the denominator.

Qwest does not remove QPP and commercial Line Sharing products from BI-4A and BI-4B results. Qwest stated that it uses summarized source data for these measure that do not allow for the mechanized determination of product, and therefore it cannot flag and exclude QPP and commercial Line Sharing products.²³⁰

Liberty concluded that Qwest's method for calculating this measure conforms to the PID.

During 2004, Qwest implemented some changes to the RRS program that extracts data from PANS for the BI-4A measure.²³¹ For the January 2004 reporting month, Qwest implemented the new bill impact indicator fields, and began to exclude CRIS records with no billing impact from BI-4A reported results. According to Qwest, prior to this change it included both bill impacting and non-bill impacting records in reported results.²³²

For the March 2004 reporting month, Qwest introduced a product code of "other access" that it used to identify wireless accounts that should not be included in results. According to Qwest, these records were eligible for inclusion in results prior to the change.²³³ Qwest explained that it added this change to identify records associated with wireless accounts that were not otherwise excluded prior to the extraction of IABS data to PANS.²³⁴ Qwest also implemented other program changes of a housekeeping nature during 2004 that had no effect on reported results.²³⁵

²³⁰ Response to Data Request #119.

²³¹ Qwest made only a formatting change to the BI-4B program during 2004 that had no effect on reported results.

²³² Response to Data Request #126.

²³³ Responses to Data Requests #85 and #212.

²³⁴ Interview #8, June 15, 2005. The program checks the Master Customer Number field for certain characters that indicate that the account is for wireless.

²³⁵ For example, Qwest implemented a change to prevent duplication of records when it had to rerun the monthly Ad Hoc files. Qwest also implemented a change in October 2004 to capture nine bills that had been inadvertently excluded from October 2004 data because of a data extraction timing issue. In response to Data Request #86, Qwest indicated that this situation was rare.

Qwest made no changes to the BI-4 sub-measures that required a rerun of results.²³⁶

As part of its data validation efforts, Liberty focused on the December 2004 monthly Ad Hoc files, which Qwest uses for the calculation of results. Because of the small number of records, Liberty reviewed all the transactions from the BI-4B monthly Ad Hoc file. Liberty reviewed transactions from the monthly BI-4A Ad Hoc file, using a systematically drawn sample of over 100 transactions taken from each of the original three Bell Operating Company Regions served by Qwest. The monthly Ad Hoc files contain both original and derived data fields. In order to substantiate the programming logic it examined earlier, Liberty reviewed the derived data fields needed for the calculation of BI-4 sub-measure results to verify whether RRS calculated them correctly from the source data.

For the BI-4A data, Liberty focused on the exclusion code, late bill indicator (for IABS records only), and the BI-4A inclusion indicator fields.²³⁷ Liberty found that Qwest calculated them correctly. For the BI-4B data, Liberty examined the exclusion code and total revenue fields and found that Qwest calculated them correctly.²³⁸

Liberty also reviewed the December 2004 Ad Hoc Master File created by Qwest. Liberty reviewed the records in this file for the BI-4 sub-measures, and found that they accurately captured the results that Liberty recalculated for CLEC aggregate results and selected CLECs in each state.

Liberty reviewed Qwest's documentation of the processes and systems that it uses to calculate the wholesale and retail metric results. Liberty found that the documentation for the BI-4 sub-measures contained inaccuracies. The documentation for BI-4A and BI-4B describes the extraction process from PANS as a monthly one, and makes no reference to the 62-day rolling Ad Hoc file. Also, the description of the BI-4B exclusion code field was incorrect, as were the descriptions of certain BI-4B exception types. Qwest agreed that it needed to correct these errors.²³⁹ Liberty also found that Qwest did not have adequate documentation of the flow of data from CRIS to MCAS. Liberty addresses these issues in more detail in the Findings and Recommendations section of this report.²⁴⁰

Replication

Liberty's objective for the replication task area was to recalculate Qwest's BI-4A and BI-4B CLEC aggregate December 2004 reported results for each state participating in the audit to confirm that they were calculated comprehensively and accurately. Liberty also recalculated the

²³⁶ *Summary of Notes for Qwest Regional Performance Results Report*, dated January 24, 2005, published on Qwest's website. In response to Data Request #191, Qwest confirmed that there were no systems changes during 2004 that required a rerun of results.

²³⁷ Liberty also verified that the late bill indicator for CRIS records, which is already assigned before RRS, was consistent with the service order completion date and bill processing dates shown.

²³⁸ The December 2004 Ad Hoc files did not contain all exclusion codes, therefore Liberty's ability to verify certain exclusion codes was limited.

²³⁹ Interview #8, June 15, 2005. Qwest noted that these were cut-and-paste type errors or typos.

²⁴⁰ Liberty Finding 18.

BI-4A Qwest retail result for each participating state, which is the parity standard for that sub-measure. In addition, Liberty recalculated monthly results for five selected CLECs.

Liberty used the data in the BI-4A and BI-4B Ad Hoc tables that Qwest provided to recalculate reported monthly results for each sub-measure.²⁴¹ Liberty developed its own code to perform the replication based on the PID. As discussed above, Liberty discovered a logic error in the BI-4A measure calculation in which Qwest did not exclude non-bill impacting IABS records from reported results. This error affected Washington only, which had one such record. None of the other states had non-bill impacting IABS records that were not otherwise excluded from the measure. Otherwise, Liberty successfully replicated Qwest's December 2004 state-specific reported metric result for BI-4A and BI-4B for the CLEC aggregate, for selected CLECs, and, in the case of BI-4A, for Qwest retail.

²⁴¹ Response to Data Request #67.

V Performance Assessment Plan Payments

A. Background

Based on monthly performance, Qwest is required to make certain payments, as outlined in the state-specific QPAPs. The state QPAPs provide for payments for sub-standard performance delivered to individual CLECs (Tier 1 payments) as well as for sub-standard performance delivered to the CLECs in aggregate (Tier 2 payments).

While many similarities exist among the QPAPs and the performance measures contained within them, each state has its own QPAP. In addition, during the course of the audit year (2004), different versions of the QPAPs were in effect, depending on the month and the state. Qwest provided red-lined versions of the QPAPs to reflect these changes. The following table shows the number of relevant versions of the plans in effect, by state.

State	Number of Relevant Versions
AZ	1
ID	3
IA	3
MN	1
MT	3
NE	3
NM	2
ND	2
OR	3
SD	3
UT	3
WA	5
WY	3

Qwest also provided for each state, a table of changes, including implementation dates, for the PID versions. Some states did not update the QPAPs to incorporate the PID version changes at the time of the version release.²⁴² These PID version changes can affect payment amounts, because some of the changes affect the calculation of performance measures that are included in the QPAPs.²⁴³

Qwest typically makes Tier 1 payments directly to a CLEC based on service provided to that individual CLEC. The Minnesota QPAP also includes conditions specifying that Qwest makes a portion of these payments to a state fund established by the commission or a more general government fund. The specifics of the Tier 1 payments vary by state. Most states also stipulate

²⁴² Arizona and Minnesota, for example, continued to use PID version 5.0 throughout 2004 in their QPAPs.

²⁴³ Response to Data Request #50.

three severity levels for the payments (referred to in the plans as “low,” “medium,” and “high”), and increase the payment level if the problem lasts for more than one month.

Qwest makes Tier 2 payments to the state commission or a special state fund based on the quality of service provided to CLECs in aggregate. Tier 2 measures are typically a subset of the Tier 1 measures; however, some measures, such as PO-16 (Release Notifications), are only associated with Tier 2 payments. In addition to the overall caps discussed below, Tier 2 payments are also usually subject to a per measure payment maximum.

For both Tier 1 and Tier 2 measures, in order to determine whether it is meeting a performance standard, Qwest applies either a statistical test (for parity measures) or an absolute standard (for benchmark measures). The statistical test allows for some statistical variation from the standard before requiring payments.

Many states also have rules regarding small sample size. In some cases, small sample sizes are increased using “look-back” rules, which require that if the sample size falls below a certain number, Qwest must add data from previous months to the current month in order to determine whether payments are required. In other cases, there are “rounding” rules, whereby Qwest rounds the number of possible misses up to 1, when the number would otherwise be a fraction.²⁴⁴

The amount of Tier 1 payments increases according to i) the number of occurrences and ii) the number of months that Qwest has failed to meet the standard for a measure.²⁴⁵ For parity measures, Qwest calculates the number of occurrences as a statistically adjusted difference between the standard performance and the actual performance. Qwest typically determines the Tier 2 payment amounts by the number of occurrences. Payments for Tier 1 and Tier 2 measures also depend on a severity level assigned to the measure. The differences in payments and methods of defining severity levels vary by state. The tables with severity levels by measure and Tier appear in the QPAP.

Many states choose to apply both minimum and maximum payments in the QPAP. Minimum payments are applied when volumes are low but Qwest still fails the measure. The QPAPs contain two provisions for such minimum payments: one is for developing markets for which the aggregate CLEC volumes are small, and the other is for cases in which volumes are small for individual CLECs. The QPAPs apply caps after some fixed amount of money is paid. These caps were high enough that they were not reached during 2004.

In order to calculate the Tier 1 and Tier 2 payments, Qwest uses the Qwest Performance Assurance Reporting System (QPARS). As noted above, at a high level, this system:

- Gathers data from the measure results in a RRS output file called the Master File

²⁴⁴ For example, if the standard is 95 percent on-time and there are only ten orders, the standard would mean that 9.5 of the ten orders must be on-time. Some states allow that just 9 orders may be on-time and Qwest would still not require payment on the measure. Other states require that prior months' data are added before making the comparison.

²⁴⁵ In the QPAPs, an “occurrence” is a technical term defined by mathematical formula, but the number of occurrences is roughly the number of orders or items that are below the standard defined for the measure. For measures requiring statistical testing, the number of occurrences is adjusted to reflect statistical variation.

- Compares measure results to benchmarks using reference tables by state
- Determines applicable CLECs for Tier 1 payments
- Makes comparisons and looks up payment amounts
- Creates payment files for Accounts Payable processing.

After these payment files are created, QPARs begins another process in which it:

- Generates QPAP reports by CLEC and state
- Creates a payment file for accounts payable
- Determines which payments are in the form of checks, electronic fund transfers (EFTs), or bill credits
- Appropriately routes the payments
- Completes the payments.

The processing required for these payment determinations differs by state, and depends on whether the CLEC has opted into the payment plan in the state.

B. Analysis and Evaluation

Liberty audited the payments through a combination of document review, payment validation, replication, and sampling. Liberty began by examining each version of the QPAP in effect during the calendar year 2004, for each state.

Liberty divided the audit into four areas, based on the following goals:

- Determine whether Qwest accurately calculated payments
- Determine whether Qwest properly implemented QPAP changes
- Determine whether Qwest properly rendered those calculated payments
- Determine whether Qwest consistently and completely documented its processes with respect to the QPAPs.

1. Payment Calculation

To verify payment calculation, Liberty requested the Master Files associated with the completion of the performance measure runs for each month. In addition, Liberty requested the payment input files that Qwest enters into the accounting process, which leads to the rendering of the payments. The Master Files show, for each measure and CLEC, the performance results, the outcomes of the statistical tests, and the regional results. The payment files show these performance results as well. The payment files also show the number of occurrences (when applicable), the payment amounts, and the Z-score used in the payment and occurrence calculations.

Liberty reviewed a two-month sample of the Master Files, May 2004 and December 2004, to verify the accuracy of the transcription of Qwest and CLEC results from various stages in the payment calculation process (from Master Files to the payment files). Liberty also reviewed the payment files in order to confirm that the proper benchmark was used and that the proper statistical test was used.²⁴⁶

Liberty reviewed all 12 months of the payment files to confirm whether Qwest correctly calculated Tier 1 and Tier 2 payments and properly included CLECs after their "opt-in" date.²⁴⁷

Liberty calculated the number of occurrences, where appropriate, as a function of the difference between the calculated performance measure results and the statistical result or the benchmark performance. For these occurrence-based measures, Liberty used this number of occurrences to calculate the payment. For measures that were not occurrence-based, Liberty simply compared the performance results to the statistical cutoff or benchmark to determine pass or failure. For failures, the amount of the payment is based on which measure failed.²⁴⁸

During its replication, Liberty applied minimums and caps to the payment amounts (as appropriate), determined whether an increased payment was required due to multiple misses, and verified whether Qwest appropriately referred to prior months' data as specified by the relevant QPAP.

Liberty performed the following steps in its payment calculation review:

1. Selected measures included for possible payments in either Tier 1 or Tier 2, using the information in each state's QPAP.
2. For each eligible measure, determined the performance standard using parity or benchmark rules.
3. For benchmark standards, added data as necessary to apply look-back rules, and adjusted the standard according to rounding rules.
4. For those parity measure/CLEC/state combinations for which the performance did not exceed the standard, applied the appropriate statistical test to determine whether Qwest passed or failed.²⁴⁹
5. For benchmark and parity failures for occurrence-based measures, used the state-specific QPAP to determine number of occurrences.
6. Where appropriate (according to the applicable QPAP), reviewed prior months' performance to determine severity or payment level.

²⁴⁶ Liberty reviewed these data because only the Master Files, and not the payment input files, contain statistical test results for both the modified Z test and for the permutation test.

²⁴⁷ The opt-in date is the date an individual CLEC opts into the plan. Prior to this date individual penalties are not paid. An exception is Minnesota, where Qwest pays individual penalties to the state fund prior to the opt-in date.

²⁴⁸ For Minnesota, further adjustments may be made to the payment amounts, including severity escalations and benchmark adjustments.

²⁴⁹ Note that the Master File contains the results of both types of possible tests (*i.e.*, the permutation test and the modified Z test) so this step is necessary to determine which test result to use, rather than to perform the test itself.

7. Used tables and charts in the QPAP to determine, for each failure, the measurement group and associated payment amount per occurrence for the measurement group.
8. Using steps 5 through 7 above, determined Tier 1 and Tier 2 payment amounts.
9. Applied minimums and caps as appropriate, according to the applicable QPAPs, in order to determine final payment amounts.
10. For each payment, determined amount, if any, to be allocated to special funds.
11. Excluded CLECs that had not opted in or opted in later than the period under audit.
12. Used state-specific QPAP rules to determine portion of payments to be paid to the state and to the CLEC.

The following table shows the files used, items checked, and coverage for each audited item.

Items Verified	Input File Used	Output File Used	Months Verified	Method of Verification
Qwest Numerator	Master File	Payment Input File	May 2004 December 2004	100% of records examined from input to output file. Since same field appears on both files, this check is simply a transcription check.
Qwest Denominator	Master File	Payment Input File	May 2004 December 2004	100% of records examined from input to output file. Since same field appears on both files, this check is simply a transcription check.
Qwest Result	Master File	Payment Input File	May 2004 December 2004	100% of records examined from input to output file. Since same field appears on both files, this check is simply a transcription check.
CLEC Numerator	Master File	Payment Input File	May 2004 December 2004	100% of records examined from input to output file. Since same field appears on both files, this check is simply a transcription check.
CLEC Denominator	Master File	Payment Input File	May 2004 December 2004	100% of records examined from input to output file. Since same field appears on both files, this check is simply a transcription check.
CLEC Result	Master File	Payment Input File	May 2004 December 2004	100% of records examined from input to output file. Since same field appears on both files, this check is simply a transcription check.
Qwest input file included correct Z-score	Master File	Payment Input File	May 2004 December 2004	100% of records examined from input to output file. Liberty verified that the correct Z-score was used. In some cases, permutation tests were used, and in others, modified Z tests were used.

Qwest input file included correct performance measures and disaggregations	QPAP measure reference table	Payment Input File	January – December 2004	100% verification of performance measures, sampling of disaggregations that did not change over the course of the year, 100% of changed or new disaggregations.
Benchmark	Master File, RRS benchmark Reference Table, QPAP benchmark Reference Table	Payment Input File	January – December 2004	100% of records examined from input to output file for benchmark rules. Liberty verified 100% of records for appropriate use of look-back rules and benchmark rounding. Liberty verified a sample from the reference table to ensure benchmark standards were correct. Liberty verified 100% of new or changed benchmark standards.
Occurrences	Payment Input File	Payment Input File	January – December 2004	100% verification of positive occurrences. Liberty used verified items (numerators, denominators, results, Z-scores, and prior month results) to calculate and verify the number of occurrences in the Payment input file.
Tier 1 Payments	Payment Input File	Payment Input File	January – December 2004	Liberty used occurrences and other verified results to verify 100% of the Tier 1 payment amounts. ²⁵⁰
Tier 2 Payments	Payment Input File	Payment Input File	January - December 2004	Liberty used occurrences and other verified results to verify 100% of the Tier 2 payment amounts. ²⁵¹

As shown in the table, Liberty successfully replicated 100 percent of the Qwest and CLEC performance measure numerators, denominators, and results for the months of May 2004 and December 2004. Liberty also recalculated 100 percent of the occurrence and payment calculations for all 12 months in 2004.²⁵² In addition, Liberty examined the reference tables that contain information about the performance measures to be used for the QPAP and the benchmark standards for the QPAP, in order to ensure that Qwest used the correct figures. Liberty also examined every QPAP change that occurred during 2004 to verify that the change was properly reflected in the QPAP calculations.

Through this combination of results replication, review of changes implemented, and sampling of reference table and smaller items, Liberty verified the accuracy of the payment calculations for each month in 2004.

²⁵⁰ For interest, penalties, and adjustments, Liberty reviewed May and December 2004 data.

²⁵¹ For interest, penalties, and adjustments, Liberty reviewed May and December 2004 data.

²⁵² In cases where data outside of the 2004 reporting period were required to complete a calculation, Liberty checked to make sure that the resulting calculated payments were consistent with the 2004 data. For example, Washington requires increasing Tier 1 payments, based on the number of consecutive months that failed. For January and February 2004, Liberty calculated a failure for the OP-4A measure for the Line Sharing product for an individual CLEC. This indicated a Tier 1 payment per occurrence of \$300 in February 2004 if the failure did not occur in the four months prior to January 2004 (September through December 2003), but more if the failure did (ranging up to \$800). Liberty verified that the charge per occurrence was at least \$300.

Master Data File Fields

As shown in the table above, Liberty began with the Master Data File and used the appropriate QPAPs and reference tables to verify the following fields for all performance measures for the May and December 2004 data months: Qwest numerator, denominator, and result; CLEC numerator, denominator, and result; Z-score used; and benchmark used. For the numerators, denominators, and results, the exercise was primarily one of checking to ensure the same figures appeared in the Master Data File and the payment input file. Liberty also checked to determine whether Qwest appropriately modified the CLEC Result field in the event that a look-back rule required the compilation of data from prior months.²⁵³

For these six fields, Liberty checked 21,688 line items for the two months, and found no differences between the Master Data File and the payment input file.

In order to verify the Z-scores and benchmarks, Liberty applied rules from the QPAP to determine the appropriate Z-score or benchmark for each performance measure. Liberty found that Qwest used the correct Z-score for the 14,091 CLEC-state-month-measure-product combinations of parity measures for which it calculated Z-scores.

Some circumstances also required the use of a permutation test; however, Qwest could not always compute that test result. Qwest's procedure was to use the modified Z-score, if calculable, in these circumstances. If the modified Z-score was also not calculable, Qwest used the Qwest retail result as a benchmark. While Liberty believes Qwest's process is appropriate, Qwest's documentation did not explicitly address the procedure to be used in this circumstance.

Liberty also reviewed each result with a benchmark standard, in order to ensure that Qwest used the appropriate benchmark. In 19 out of 7,193 cases in December 2004, all for OP-4A and OP-4B, Liberty found that Qwest did not use a benchmark when a benchmark of 3.3 should have been used. For the remainder of the performance measure calculations in May and December 2004, Liberty found that Qwest used the appropriate benchmark. Although in December 2004 this did not result in Qwest under- or over-paying, Liberty also reviewed the months July through November 2004.²⁵⁴ Liberty found one instance in which Qwest did not pay the proper amount. Liberty addresses this issue in more detail in the Findings and Recommendations section of this report.²⁵⁵

Occurrence and Payment Calculation Verification

In order to determine whether Qwest correctly calculated occurrences and payments, Liberty began with the payment input files. As described above, Liberty verified the key fields in these files for the months of May and December 2004. Liberty used these key fields in all the months of 2004 to verify occurrence and payment calculations for 2004.

²⁵³ The CLEC result in Minnesota uses only quarterly results for PO-2, so this result might also have been modified.

²⁵⁴ Liberty chose to review these additional months because this disaggregation first appeared in the QPAP in July 2004.

²⁵⁵ Liberty Finding 12.

In order to perform this verification, Liberty relied on reference tables used by Qwest to determine payments. These tables show payment amounts, based on the measure and any escalation rules based on the number of months failed. Liberty used these reference tables to calculate payments for all months of 2004. Liberty then compared these payment amounts to the amounts contained in the payment input files.

In total, Liberty checked 143,069 line items that may have resulted in a payment. This includes all states, CLECs, and performance measures with activity in the each month of 2004. Qwest made Tier 1 payments on 3,592 line items, Tier 2 payments on 774 line items, and special fund payments on line 196 items. In total, Qwest made payments in 4,193 cases.²⁵⁶

For each line item, Liberty calculated the payment amount required (or verified that none was required). In all cases, Liberty was able to replicate the Qwest payment.²⁵⁷ However, Liberty found errors in some of Qwest's reference table entries. These errors, however, had not caused any differences in payments. Liberty addresses these issues in more detail in the Findings and Recommendations section of this report.²⁵⁸

2. QPAP Change Implementation

During the course of the audit year (2004), different versions of the QPAP were in effect, depending on the month and the state. Qwest provided red-lined versions of the QPAPs that documented these changes. Liberty reviewed all of the QPAP revisions.

To verify the accuracy of these revisions, Liberty examined both the Qwest reference table that associates each state plan with the relevant performance measures, product codes, effective dates, and payment tier,²⁵⁹ as well as the Qwest reference table that associates each state plan with dollar amount of Tier 2 payment.

Qwest also provided a table of changes to the PID for each state, with implementation dates, that would affect the payment amounts.²⁶⁰ Liberty reviewed all of the PID changes that affected the QPAP.

To verify the accuracy of these PID revisions, Liberty examined the following sources:

- Qwest reference table that associated each state plan with the relevant performance measures, product codes, effective dates, and payment tier²⁶¹

²⁵⁶ The Tier 1, Tier 2, and Special Fund payment items do not sum to the total, because the same item may have more than one payment type.

²⁵⁷ During the audit, Liberty was unable to replicate payments to two CLECs in Minnesota. One case, however, corresponded to a commercial agreement product and was therefore excluded from the PAP. The other case was for PO-20, which, as noted in Finding 25, Qwest prematurely included in the Minnesota PAP calculations. In any case, Qwest noted in its response to Preliminary Finding #20 that it implemented programming in its November 2004 release to address the issue and corrected the PO-20 calculation.

²⁵⁸ Liberty Findings 15, 16, and 17.

²⁵⁹ Response to Data Request #54.

²⁶⁰ Response to Data Request #50.

²⁶¹ Response to Data Request #54.

- General Qwest reference table that associated each state plan with the benchmarks for performance measures and disaggregated performance measures²⁶²
- Qwest reference table that associated each state plan with the benchmarks for specific performance measures and disaggregated performance measures²⁶³
- Qwest's description of product codes.²⁶⁴

Liberty reviewed each one of the QPAP revisions for each state for the audit year 2004. Overall, Liberty found that the changes were implemented properly. However, as noted below, Liberty found some instances where the descriptions of the changes were vague.

Most of the QPAP changes affected PO-20 ((Expanded) Manual Service Order Accuracy). The QPAPs created four "phases" for determining PO-20 payments, with each phase adding additional fields to be considered. Revisions to the plans added a "low volume exception," which essentially allows one order error to occur without payment when there are very few orders. The exact terms of the exception vary depending on the phase in which the additional fields were added. Liberty believes that the rules for determining payments relating to PO-20 are somewhat vague, and that these rules could be simplified, making both compliance and auditing more streamlined. For example, North Dakota's red-lined QPAP contains the following language regarding the PO-20 additions:²⁶⁵

For each phase beginning with Phase 1, there will be no more than a 3 month measurement stabilization period for all fields introduced in that phase. Additional fields are not subject to payments during the measurement stabilization period.

The language indicates that the period is no more than three months. However, it is unclear if the stabilization period ends after one, two, or three months. In practice, Qwest uses three months, which is not inconsistent with the language.

The red-lined QPAPs indicate that for several states, PO-20 was added to the list of performance measures subject to per occurrence Tier 1 payments. According to the QPAPs, PO-20 was categorized as "low" for a certain period of time, and was then re-categorized as "medium." However, by the time of the approval of the PID version concerning PO-20, the current version of the state QPAP plans listed PO-20 as a measure with a payment level of medium. Thus, according to the Qwest reference table q_meas, which lists measures in the QPAP, PO-20 was never categorized as "low" for Tier 1 in any state. For one group of states, there was no PO-20 measure at all prior to September 9, 2004, at which time PO-20 was categorized as Tier 1 ("medium.") For another group of states, PO-20 was categorized as number "2" for Tier 2, prior to July 31, 2004 when it was re-categorized as Tier 1 ("medium.") For this second group of states, q_meas confirms the red-lined QPAPs, which delete PO-20 from the list of performance measures subject to Tier 2 per measurement payments to state funds.

²⁶² Response to Data Request #54.

²⁶³ Response to Data Request #54.

²⁶⁴ Response to Data Request #200.

²⁶⁵ Qwest North Dakota SGAT Sixth Revision, Second Amended Exhibit K, June 24, 2004, received in response to Data Request #50.

The red-lined QPAP for North Dakota in its second Amended Exhibit K (June 24, 2004) indicates that PO-20 was added to the list of performance measures subject to per occurrence Tier 1 payments (“low”). However, this was before approval of PID version 8.0 for North Dakota. North Dakota had not yet approved PID changes for version 8.0 for the purposes of QPAP payments at the end of 2004, and thus these changes were not incorporated into the North Dakota QPAP implementation for 2004.²⁶⁶

The table below summarizes the revisions to the performance QPAPs in 2004; it encompasses all states except Colorado.²⁶⁷

REVISIONS TO PERFORMANCE ASSURANCE PLANS (2004)

Description of Reported Change	States	Date of Revision(s)	Verification Results
Added PO-20 to Tier 1 (Low) No payment if 1-20 orders and only one error. No payments for additional fields during stabilization period of no more than 3 months.	ND UT WY MT NE	6/24/04 (added) 9/15/04 (revised)	Verified as of 9/1/04, PO-20 is Tier 1 (Medium), but no information prior to 9/1/04. No record of any Tier 1 (Low), because the QPAP change from low to medium occurred prior to the PID approval. Thus the first implemented version was for Tier 1 (Medium). For ND, no record of PO-20.
Added PO-20 to Tier 1 (Low). No payment if 1-20 orders and only one error. No payments for additional fields during stabilization period of no more than 3 months. During Phase 1 stabilization period, payment will continue for the original PO-20 as defined in Exhibit B1.	SD OR IA ID NM	6/24/04 (added) 9/15/04 (revised)	Verified as of 9/1/04, PO-20 is Tier 1 (Medium), and pre-7/31/04, PO-20 was Tier 2 (“2”). No record of any Tier 1 (Low), because the QPAP change from low to medium occurred prior to the PID approval. Thus the first implemented version was for Tier 1 (Medium).
For Tier 2 payments, PO-20 as per Exhibit B1 will continue to be subject to payments until Phase 1 of the new PO-20 becomes eligible for payments following stabilization period of no more than 3 months.	IA SD ID NM OR	6/24/04	Verified.

²⁶⁶ Response to Data Request #50.

²⁶⁷ Response to Data Request #50.

Description of Reported Change	States	Date of Revision(s)	Verification Results
Changed PO-20 from Low to Medium in Tier 1. Added low volume exception with no payments during stabilization period.	IA, ID, MT, NE, NM, SD, UT, OR, WY	9/15/04	For MT, NE, UT and WY, verified as of 9/1/04, PO-20 is Tier 1 (Medium), but no information prior to that date. For SD, OR, IA, ID and NM, verified as of 9/1/04, PO-20 is Tier 1 (Medium) and pre-7/31/04, PO-20 was Tier 2 ("2"). No record of any Tier 1 (Low), because the QPAP change from low to medium occurred prior to the PID approval. Thus the first implemented version was for Tier 1 (Medium).
Added PO-20 to Tier 1 (Medium). Added low volume exception with no payments during stabilization period.	WA	8/27/2004 (added) 9/24/2004 (revised)	Verified as of 9/1/04, PO-20 was Tier 1 (Medium), pre-7/31/04, PO-20 was Tier 2 ("2").
Revised rules for payment during stabilization period.	WA	9/24/2004	Verified.
Deleted PO-20 from Tier 2.	IA, ID, NM, SD, OR, WA	9/15/2004	Verified with effective date 9/1/2004.
Added MR-6d and MR-6e to Tier 1 (High).	IA, ID, MT, NE, NM, SD, UT, WA, OR, WY	9/15/2004 8/11/2004 (WA only)	Verified with effective date 9/1/2004.
Added DS1-EELs to Tier 1 with specific dollar amounts for Months 1-6 and beyond.	WA	2/17/2004	Verified with effective date 4/1/2004.

Performance Measure Table Analysis

Qwest provided, for each state, a table of changes to the performance measures that would affect the payment amounts, along with implementation dates. Liberty reviewed 100 percent of these changes.

Liberty confirmed the following changes:

- Revision in standard from diagnostic to parity for the Line Sharing product for OP-6
- Addition of Line Splitting as a separate product to the OP-3, OP-4, and OP-6 measures
- Revision in standard from parity to benchmark for Unbundled Loop (UBL) DS1 Capable Loop for OP-4.

Liberty reviewed changes to the PAP and took as a starting point the results of the measures PO-1A and PO-1B. For these measures Qwest added the 9th (Connecting Facility Assignment) and 10th (Meet Point Inquiry) transaction types to most PAPs during 2004 with the introduction of benchmarks. Liberty confirmed that a change occurred to these performance measures on July 1, 2004. Because the results show aggregated transactions for PO-1A and PO-1B, Liberty could not verify that the 9th and 10th transaction types were added to PO-1A and PO-1B because these changes were part of that aggregation into one result.

Qwest disaggregated the reporting of EELs into EEL-DS0, EEL-DS1, and EEL-DS3. However, only EEL-DS1 was subject to the QPAPs (as the remainder are diagnostic), and Liberty confirmed the addition of that disaggregation. Because the effective start date for these was in the year 2000, the PAP change occurred immediately upon introduction of the disaggregation into performance measure reporting.

Liberty verified the addition of Unbundled Loop xDSL-ISDN (UBL_XDSL1) to various performance measure calculations. Liberty also verified that Qwest changed the standard to parity for Line Splitting for certain performance measures with the exception of OP-5A. For OP-5A, the benchmark table shows a benchmark of .965 for Line Splitting.

The table below summarized changes to the PIDs that affected payments.²⁶⁸

PID Changes relevant to QPAPs

Description of Reported Change	States	Effective start date	Effective end date (if any)	Verification Results
Replaced GA-1B and GA-1C with GA-1D. ²⁶⁹	IA, ID, MT, NE, NM, ND, SD, UT, WA, WY, MN, OR	01/01/04	12/31/04	Verified
PO-1A and PO-1B: Added 9th and 10th transaction types to reports.	ID, NM, ID, NE, MT, ND, OR, SD, UT, WA, WY	07/01/04		Verified some change occurred on 7/1/04; could not verify which transactions were added.
OP-6: Changed from diagnostic to parity for Line Sharing.	ID, NM, IA, NE, MT, ND, OR, SD, UT, WA, WY	07/01/04		Verified

²⁶⁸ Response to Data Request #50.

²⁶⁹ The redlined QPAPs also document this change.

Description of Reported Change	States	Effective start date	Effective end date (if any)	Verification Results
OP-3, OP-4, and OP-6: Added Line Splitting as a separate product.	ID, NM, IA, NE, MT, ND, OR, SD, UT, WA, WY	07/01/04		Verified
OP-3, OP-4, OP-6, MR-5, MR-6, MR-7, and MR-8: Replaced aggregated EELs with disaggregated reporting for EEL DSO EEL DS1 and EEL DS3.	ID, NM, IA, NE, MT, ND, SD, UT, WY	07/01/04 08/01/04 (MR-7 only)		Verified. The PAP changes only applied to EEL-DS1, since the other measures were diagnostic. Because the items were introduced to the reference table with an effective date of 2000, the changes occurred immediately with the introduction of the additional disaggregations into the performance measure reporting.
OP-3, OP-4, OP-6, MR-5, MR-6, MR-7, and MR-8: Replaced aggregated EELs with disaggregated reporting for EEL DSO EEL DS1 and EEL DS3.	WA	04/01/04		Verified for OP-3. For OP-4 OP-6 MR-5 MR-6 MR-7 and MR-8 verified disaggregated reporting of EEL-DS1 as of 4/1/2004. No prior record of aggregated EELs.
OP-3, OP-4, OP-6, MR-5, MR-6, MR-7, and MR-8: Replaced aggregated EELs with disaggregated reporting for EEL DSO EEL DS1 and EEL DS3. Implementation included a rerun for PAP back to the 9/04 data.	OR	09/01/04		OP-3: Only aggregated EELs; no disaggregated. OP-4, OP-6, MR-5, MR-6, MR-7, and MR-8: EEL-DS1 disaggregation not shown in the QPAP reference table. This is due to the fact that the implementation was in 2005, and was retroactive to September 2004. ²⁷⁰
OP-4: Changed from parity to benchmark for UBL DS1 Capable Loop.	NM, SD, UT, WA	07/01/04		Verified.

²⁷⁰ Response to Data Request #50.

Description of Reported Change	States	Effective start date	Effective end date (if any)	Verification Results
PO-2: Added UNE-P Centrex 21 to the UNE-P POTS product category. No change to existing standard.	NM, WA	12/01/04 (NM) 08/01/04 (WA)		Verified addition of UNE-P Centrex 21 to UNE_P_POTS..
OP-3, OP-4, OP-5, OP-6, MR-3, MR-6, MR-7, and MR-8: Added UBL_XDSL1	ID, NM, IA, NE, MT, OR, SD, UT, WA, WY	09/01/04		Verified for OP-3, OP-4, OP-5 (except OP-5B), OP-6 MR-3, MR-6, MR-7, and MR-8.
OP-3, OP-4, OP-5, OP-6, MR-3, MR-6, MR-7, and MR-8: Added UBL_XDSL1	MN	09/01/04	09/30/04	Verified for OP-3, OP-4, OP-5 (except OP-5B), OP-6 MR-3, MR-6, MR-7, and MR-8. Because these changes should not have been made, see Finding 25 For OP-5B eff. date is 11/01/05 through 09/30/04.
Discontinued manual PO-20 payments with the last payment made on 7/04 data produced in 8/04 and paid on in 9/04.	ID, NM, IA, NE, MT, OR, SD, WA	07/01/04		Impossible to verify using QPAP reference tables.
PO-20 Phase I paid for 08/04 data going forward on the 11/04 report of data produced in 12/04. Removed it in the 12/04 release/report produced in 01/05 and paid on in 02/05. Qwest did not go back to recoup any payments that may have results from early implementation from 8/04 through 12/04 results.	MN	12/01/04		Impossible to verify exactly using QPAP reference tables. However, since these changes should not have been made, it resulted in Finding 25 below.
PO-20 Phase I paid for 08/04 data going forward on the 11/04 report of data produced in 12/04.	ID, NM, IA, NE, MT, OR, SD, UT, WA, WY	08/01/04		Impossible to verify using QPAP reference tables.

Description of Reported Change	States	Effective start date	Effective end date (if any)	Verification Results
MR-3, MR-6, MR-8, and OP-5A: Changed standard for line splitting to parity	ID, NM, IA, NE, MT, OR, SD, UT, WA, WY	09/01/04		Verified for all measures except OP-5A. For OP-5A, there is benchmark .965 for line splitting effective 11/01/04.
Discontinued PAP for PO-10	MN	07/01/04		Verified

As noted in this table, there were no QPAP changes in Arizona during 2004. On February 15, 2005, Arizona adopted PID version 5.0a and later PID versions for inclusion in its QPAP, and, using these later versions, Qwest subsequently revised some payments in Arizona based on 2004 results.²⁷¹ Minnesota has not yet adopted PID version 5.0a and subsequent versions for inclusion in the QPAP. Nevertheless, Qwest calculated and rendered some payments in Minnesota based on these later PID versions. This matter is addressed in the Findings and Recommendations section of this report.²⁷²

3. Payment Rendering

In order to complete the payment rendering verification stage, Liberty used the payment files that Qwest input into the payment rendering process. Liberty then compared those files to the actual instructions for check and EFT payments, as well as to the reports showing the amount paid. In addition, Liberty contacted states and CLECs to verify that the payments had actually been received.

Liberty performed the following analysis steps for its payment rendering review:

1. Obtained input files showing all payments to be made for two data months
2. Obtained corresponding files for the data months showing payments to be processed by i) check, ii) EFT, and iii) bill credits
3. Reconciled steps 1 and 2, to ensure that the instructions concerning payment amounts were correct for each CLEC and each state commission
4. Reviewed a sample of evidence of actual payment for all 12 months in 2004 to ensure that Qwest carried out payment instructions
5. Reviewed QPAP reports to ensure they accurately reflect payments made.

²⁷¹ Response to Data Request #274.

²⁷² Liberty Finding 25.

The purpose of the reconciliation was to ensure that instructions were correctly issued for every payment in the input file, for both CLECs and state commissions, through a check, an EFT, or a bill credit. Liberty obtained output files for these three processes for the months of May 2004 and December 2004 in order to perform the reconciliation. Qwest's Service Delivery Report identified payments paid by bill credits on a monthly basis. Qwest uses checks and EFTs in four states (Colorado, Minnesota, Nebraska, and Washington), which therefore did not appear in this report; Qwest issues bill credits in all other states. In the event that a CLEC has a payment due that exceeds their monthly bill, Qwest issues a check or EFT for the difference. The Service Delivery Report also contains a summary of Tier 2 payments to states. Qwest sends the Accounts Payable Mechanized Input Payment file to Accounts Payable for payments by check or EFT to CLECs. The Accounts Payable Input Payment file contains mostly activity for the four states that do not use bill credits; the rest consists of checks paid to a CLEC when the payment exceeds that CLEC's monthly bill. This report also lists State Fund payments by check or EFT, identifying them with a CLEC ID of SF1.

Qwest also has a high-level reconciliation report, the CLEC Payment Summary Report. It shows removal of current months' negative payment amounts and adjustments to current month payment amounts; amounts paid by Service Delivery and returned from Service Delivery; amounts paid via the Accounts Payable Mechanized Input Payment file; and wire transfers or vouchers.²⁷³ Many states opted to pay their Long Term PID Administration (LTPA) fees by allowing Qwest to recover the costs from the monthly Tier 2 payments. Liberty factored this into its reconciliation. Liberty verified the accuracy of the payment instructions for May 2004 and December 2004 for every state commission and CLEC.

Liberty also reviewed a sample of Qwest's payments rendered for all months, to ensure that the states and CLECs actually received the payments. Qwest provided proof of payment evidence for the months of May 2004 and December 2004 for all 13 states, including copies of bank statements, cancelled checks, or records showing direct deposits.²⁷⁴ Qwest also provided proof of payment evidence for a selection of CLECs paid by check, EFT, and bill credits for the same months.²⁷⁵ Liberty compared the payment evidence that Qwest provided with the payment files and found no discrepancies.

Liberty contacted each state commission to determine whether they received the proper Tier 2 payments and also to determine whether the state had any issues with the payment process. Twelve of the thirteen states participating in the audit supplied payment information. South Dakota was not able to give specific payment information but responded that the PAP was working satisfactorily. Liberty also selected a sample of CLECs to survey to determine whether they received proper payment.²⁷⁶ In addition, Liberty contacted CLECs that the commissions suggested should be included as participants. Four of the thirty-one CLECs that were sent surveys responded. Liberty uncovered no payment discrepancy issues from the analysis of any of the data provided.

²⁷³ Response to Data Request #71 and Interview #23, August 4, 2005.

²⁷⁴ Response to Data Request #232

²⁷⁵ Response to Data Request #233.

²⁷⁶ Response to Data Request #224. Liberty requested CLEC contact information from Qwest so that the CLECs could be contacted directly. Qwest opted to contact the CLECs themselves, citing confidentiality concerns.

Liberty did identify one issue related to the bill credits that affects CLEC resources. Specifically, a CLEC must contact the Qwest account team to have them verify the Billing Account Number (BAN) that Qwest applies to the credit for each month for tracking purposes. A potentially time consuming process, this delays a CLEC's ability to verify that it received the proper bill credit. Liberty notes that this issue is not with accurate payment processing, but with the inconvenience in verifying payments as experienced by the CLEC.

4. Documentation

Liberty performed the documentation review concurrently with the other stages of the payment audit. Because of Liberty's method of replication, this enabled Liberty to uncover issues with documentation and with Qwest's interpretation of the QPAPs. Liberty reviewed the documentation of Qwest's processes to ensure that it was sufficient to properly implement the QPAPs and to ensure that inconsistencies did not exist between the QPAP and the documentation and processes in place to implement those plans.

Liberty's review looked at both the consistency and completeness of the documentation. Liberty reviewed Qwest's documentation to ensure that it has sufficient detail to reproduce the payment amounts from the key datasets. While the documentation for a complex system, such as the one that implements the QPAP and the accounting process, is likely to have some gaps in logic that are open to interpretation, Liberty reviewed the documentation with the expectation that these gaps would be minimal.

Liberty found that, overall, the QPAPs themselves, along with the relevant chapters of Qwest's Regulatory Reporting System (RRS) documentation,²⁷⁷ sufficiently document the implementation of the QPAP. Using this information, Liberty successfully reproduced the logic and results of all the major steps in the system implementation.

As noted above, Liberty found some of the changes associated with the phased treatment of PO-20 to be vaguely worded. However, because these changes dealt with a temporary transition, Liberty does not believe that any changes in the documentation are required at this point.

²⁷⁷ Response to Data Request #51.

VI. Findings and Recommendations

A. Findings

Finding 1: Qwest's process for calculating New Service Installation Quality Reported to Repair (OP-5A) may have ignored troubles on some auxiliary lines. Classification: 2 (Preliminary Finding #1)

Qwest's process for calculating New Service Installation Quality Reported to Repair (OP-5A) involves combining various input files to obtain all of the data needed to calculate the measure. Key data used in this measure are service orders, which are used to identify new service installation, and reported troubles within 30 days of service order completion, which must be matched with the lines on these service orders. Because the OP-5 measures are reported one month in arrears, Qwest uses files that were created the previous month for the calculation of the OP-3, OP-4 and OP-6 measures in order to obtain the service order information. However, because these three measures are reported at a service order level and the OP-5 measures require line or circuit level information, Qwest merges the service order information with files from Work Force Administration Control (WFA-C) and Regional Service Order Repository (RSOR) to obtain the line/circuit level information that was associated with each service order.²⁷⁸ Qwest uses the WFA-C merge to obtain the design circuit identification associated with each of the designed service orders, and the RSOR merge to match the telephone numbers associated with each of the non-designed service orders. When unable to find a service order match in RSOR and WFA-C, Qwest defaults to the single main telephone number (non-design service) or main circuit ID (designed service) associated with each order. When this occurs any auxiliary lines or circuits associated with the non-matched service order are ignored.²⁷⁹ As such, these lines and circuits cannot be matched to any trouble reports within 30 days of the service order completion and are dropped from the calculation.

Qwest indicated that in December 2004, the OP-5A data shows that 99.52 percent of the orders matched to a line or circuit.²⁸⁰ While Liberty agrees that the volume of service orders with no matches in December 2004 was very low and, thus insufficiently material to warrant a change in Qwest's OP-5A calculation process, it is not clear whether December 2004 is indicative of the experience in other months. Qwest currently does not have a quality check in its process to determine how many OP-5A service order records could not be matched to the related line/circuit information for proper measure calculation.²⁸¹

In response, Qwest stated the following:

The OP-5 program currently pulls two months of historical line level data when processing OP5. Where a line level match could not be obtained, Qwest found

²⁷⁸ The line level detail needed for non-design orders are the telephone numbers provisioned with each order. The circuit level detail needed is all of the designed service circuit IDs provisioned with each designed service order.

²⁷⁹ Interview # 11, June 14, 2005, and responses to Data Requests #79 and #81.

²⁸⁰ Response to Data Request #81.

²⁸¹ Response to Data Request #82.

the orders had application dates which occurred prior to the two month data window.

Table 1 below shows that currently approximately 0.5% of the OP-5 orders have no line or circuit level information and the main telephone number is used for OP5 processing. E911 orders do not have lines associated with them, so they have been subtracted out as part of this analysis. By increasing the number of months of historical line level information to six, 99.98-99.99% of orders will have a matching line/circuit level information and will allow Qwest to use the telephone number from the line rather than the main telephone number for OP5 processing.

Table 1

Month	Percentage of Orders without a line/circuit level match	Percentage of Orders without a line/circuit level match (removing E911)	Percentage of Orders without a line/circuit match when using 6 months of line level data
Aug-04	0.44%	0.44%	0.01%
Sep-04	0.41%	0.40%	0.01%
Oct-04	0.53%	0.51%	0.02%
Nov-04	0.54%	0.53%	0.01%
Dec-04	0.49%	0.47%	0.01%

Note: Percentages have been rounded.

Qwest will update OP5 programming to pull six months of line level data starting with the July data reported in September, with a rerun of prior months (if required).²⁸²

On September 14, 2005, Qwest provided a supplemental response to this finding which stated:

Starting with July 2005 data, RRS began pulling six months of line level data. An analysis was conducted and found that although the additional months of line level data decreased June's blank records from 4209 to 308, there was no PAP impact due to this change. Because there was not a significant PAP impact, prior months of data were not rerun and the change was implemented for July 2005 going forward.²⁸³

Liberty commends Qwest for its program change that tripled the number of data months used to determine the line/circuit level data. As indicated in the Qwest supplemental response to this finding, this change significantly improved the number of orders that result in a successful line/circuit level match, thereby resulting in more accurate reporting of the OP-5A results.

²⁸² Response to Preliminary Finding #1.

²⁸³ Supplemental response to Preliminary Finding #1.

Finding 2: Qwest was excluding troubles from New Service Installation Quality Reported to Repair (OP-5A) that did not correspond to valid exclusions documented in the PID. Classification: 2 (Preliminary Finding #2)

Liberty found that Qwest was excluding some trouble reports from the calculation of the OP-5A measure that do not correspond to valid exclusions documented in the PID business rules that were used during 2004. These excluded trouble reports involve trouble tickets on the Line Sharing and on the Digital Subscriber Line (DSL) products. For Line Sharing, Qwest excluded trouble reports when the trouble report was for the voice portion of the line. For the DSL product, Qwest excluded trouble reports when the DSL service was not installed at the same time as the voice service and the trouble report does not match the service that was installed (*i.e.*, the service order is for the installation of the DSL service and the trouble reported is a voice service trouble).

Because these exclusions are isolated to the Line Share and the DSL products, they are likely to have a significant impact on the reported results for these two products.

In response, Qwest stated the following:²⁸⁴

DSL and line sharing are unique in that they share an access line that is in most cases also utilized for Resale or UNE-P POTS voice service. In other words, in many cases, two products are served by the same physical line. However, the OP-5A PID calls for Qwest to report by specified product categories, not by line, and thus to identify and track installations and troubles for DSL and line sharing separately from Resale or UNE-P-POTS.

Thus, the PID definition requires that voice troubles be associated only with specific voice product installations and that DSL or line sharing troubles only be associated with DSL or line sharing product installations, respectively. In accordance with this, Qwest's reporting system separately tracks voice-related trouble tickets and associates them with newly-installed Resale or UNE-P POTS voice service for reporting under the OP-5A PID. Similarly, trouble tickets related to DSL or line sharing are associated only with newly-installed DSL or line sharing services, respectively. In this light, to associate and report voice troubles under the DSL or Line Sharing product category would not correctly reflect the OP-5A PID requirements and would be inaccurate. Likewise, it would be inaccurate to report DSL or Linesharing troubles under the Resale or UNE-P POTS OP-5A product reporting category, as these latter products are voice products.

While Liberty agrees that DSL and Line Sharing are product disaggregations that the OP-5A PID requires to be reported separately, the current PID language does not allow for the exclusions that Qwest is taking on these products. Because of the physical rewiring necessary to provision these two services, it is possible that a customer's voice service may experience a trouble as a

²⁸⁴ Response to Preliminary Finding #2.

result of the installation of DSL or Line Sharing on the customer's line. In these cases, the trouble report on the voice service would be a direct result of the provisioning activity on the shared line; however, under Qwest's current process for calculating its OP-5A results, this trouble report would be excluded from the results calculation. Liberty recommends that Qwest clarify through the appropriate process with the state commissions whether its current process for excluding these trouble reports is compliant with the expectation for this measure. Depending on the outcome of this process, Qwest should either update its OP-5 PID documentation to reflect these exclusions or change its process to remove exclusion types 111 and 112 as valid exclusions to OP-5A.

Finding 3: Qwest was excluding LSRs with an "unknown state" data entry from LSRs Rejected (PO-4A and PO-4B) which does not correspond to valid exclusions documented in the PID. Classification: 2 (Preliminary Finding #3)

As part of the PO-4 LSR record processing, Qwest excludes some records for "missing data essential to the calculation of the measurement per the PID."²⁸⁵ Qwest stated that invalid state (exclusion type 2), invalid CLEC ID (exclusion type 31), and missing CLEC ID (exclusion type 32) fall into that category.²⁸⁶ The majority of Qwest measures are disaggregated by state, including PO-4C. However, because PO-4A and PO-4B are only reported regionally, identification of the state is not required for the calculation of the measure. Qwest uses the same code macro to determine an exclusion type 2 (invalid state) for all of its measures code, including PO-4.²⁸⁷

Qwest listed two situations for which an invalid state exclusion can occur: i) when a record contains a state code that is outside the Qwest 14-state local services operating region, and ii) when a record's state code cannot be determined. Liberty agrees that the first situation provides a valid reason for exclusion; however, Liberty believes that the second situation does not. This situation is often associated with LSRs submitted by a CLEC using only a Circuit ID or Customer Facility Assignment (CFA). In such a case, the LSR requires manual updating by a CRM administrator in order to correct the state code.²⁸⁸

Qwest reviewed the 1,406 records excluded from PO-4 for "invalid state" in 2004 and found that 923 were excluded from PO-4A, 418 were excluded from PO-4B, and only 65 were excluded from PO-4C. A total of 125 of the 1,406 records excluded were for a state outside of Qwest's 14-state region and 1,281 records were excluded because the state could not be determined by CRM.²⁸⁹ Of the 1,406 transactions that were excluded from the PO-4 calculation because of an invalid state, Qwest handled the LSRs as follows:

- 983 LSRs were processed and a FOC was issued

²⁸⁵ 14-State 271 PID Version 8.0.

²⁸⁶ Interview #1, April 27-28, 2005, and response to Data Request #35.

²⁸⁷ Response to Data Request #64.

²⁸⁸ Response to Data Request #65.

²⁸⁹ Response to Data Request #73.

- 153 LSRs were CLEC requested cancels of a previous version of the PON
- 270 LSRs were rejected by Qwest for various reasons.²⁹⁰

Qwest provided a reference to ROC Technical Advisory Group (TAG) Workshop documentation that justifies excluding records with state entries from outside Qwest's regional territory.²⁹¹ However, because Qwest processed and issued FOCs on many of the LSRs with unknown states, it does not appear appropriate to exclude these records from PO-4A and PO-4B.

The volume of records with an exclusion type 2 (invalid state) was only 1,406 for calendar year 2004 for the PO-4 measure, which is a very small percentage (approximately 0.05 percent) of the overall volume. The impact is negligible for 2004 results; however, if changes to programming caused a higher number of unknown states to appear, the impacts could become more significant.

In response, Qwest observed that including orders with unknown state could result in inappropriately including orders for activity in states outside Qwest 14-state local region:²⁹²

Qwest is addressing this concern with a two pronged action plan to minimize the occurrence of these situations:

- 1) As explained in response to DR # 65 when CLECS submit LSRs using only a Circuit ID or Customer Facility Assignment (CFA), CRM is unable to determine the state code with this limited information. In this situation the LSR requires manual updating by a CRM administrator in order to correct the state code. Qwest's documented process to manually update these requests has not been consistently followed. This issue is being addressed by the process owners and center leadership with monthly monitoring to insure records are being appropriately updated.*
- 2) In addition, as a back-up to this manual process, Qwest is implementing coding that will enable the state code to be determined by obtaining the state code from the service orders issued from the LSR when it is missing in CRM data. This code change will be made with August 2005 results reported in September.*

Qwest stated that these two efforts will minimize the number of CRM type 2 exclusions by greatly reducing the number excluded for ER state code. Liberty agrees that these efforts will reduce but not eliminate the issue.

Although the impact of this issue is apparently negligible, Qwest should review its solution through the appropriate process with the state commissions.

Finding 4: Qwest did not include all products that should roll up to the "DS3 and Above" product disaggregation when calculating the New Service

²⁹⁰ Response to Data Request #72.

²⁹¹ Response to Data Request #74.

²⁹² Response to Preliminary Finding #3.

**Installation Quality Reported to Repair (OP-5A) measure. Classification: 2
(Preliminary Finding #4)**

Liberty found that Qwest was not including any transactions that had a product code of "OCN" in the measurement results calculation. When Liberty requested additional information on the product represented by this code as well as how Qwest treats the "OCN" product in its OP-5A results calculation, Qwest stated the following:

The product represented by the prod_cd of 'OCN' is Optical Capacity Network. This product is identified in RSOR and is eligible for OP-5A calculations as part of the "DS3 and Above" reporting category. The table used to aggregate the products into the "DS3 and Above" category has not included OCN. Beginning with the reporting of June 2005 OP-5 data in August 2005 with a rerun of prior data (if required), the OCN product will be included in the aggregation table.²⁹³

The OCN product code, which applies to Optical Capacity Network orders, only appears in the "DS3 and Above" product category; however, it is likely to have an impact on the reported results for this product category.

Qwest agreed with this finding and, as stated above, plans to implement the programming change to include OCN in the "DS3 and Above" product category starting with the June 2005 results reported in August 2005.²⁹⁴

**Finding 5: The PID for LSRs Rejected (PO-4) did not clearly address the treatment of LSRs rejected for non-standard reasons. Classification: 4
(Preliminary Finding #5)**

The PID language is clear that PO-4 measures the percentage of LSRs rejected (*i.e.*, returned to the CLEC) for standard categories of errors/reasons. The list of standard reasons is included in the PID text. The PID also lists the following formula for calculating PO-4:

[(Total number of LSRs rejected via the specified method²⁹⁵) / (Total of all LSRs via the specified interface²⁹⁶ that are received that were rejected or FOC'd in the reporting period)] x 100

Qwest has interpreted the PID language such that LSRs rejected for non-standard reasons are excluded from both the numerator and denominator. Liberty agrees that such LSRs should not be counted in the numerator. Exclusion from the denominator, however, is less obvious and open to interpretation. An alternative interpretation of the PID language would include all LSRs in the denominator whether they receive a FOC or are rejected for any reason. The PID language does not specifically address the exclusion of rejects for non-standard reasons.

²⁹³ Response to Data Request #150.

²⁹⁴ Response to Preliminary Finding #4.

²⁹⁵ Either manual reject or auto-reject.

²⁹⁶ Either IMA-GUI, IMA-EDI, or via facsimile.

Qwest also excludes LSRs with multiple reject reasons from the numerator and denominator when the rejects are for both standard and non-standard reasons. Again, the language of the PID can be interpreted in more than one way. One could argue that any LSR rejected for a standard reason should be counted regardless of whether any other reject reason is present. Qwest interprets the PID to say that an LSR should be counted only if it does not have a non-standard reason for a reject.

The volume of records with LSRs rejected for non-standard reasons ranges from 4,400 to 10,200 per month for calendar year 2004, approximately 2.2 percent to 3.1 percent of all records for each month.²⁹⁷ If LSRs with rejects for non-standard reasons were included in the denominator, Qwest's PO-4 results would be reduced (improved) by a small percentage (less than 1 percent).

Qwest believes its interpretation of the PO-4 PID is reasonable and consistent with the PID definition.²⁹⁸ Qwest notes that Liberty did identify a possible alternative interpretation to the one Qwest uses for PO-4, and that the PID language does not specifically address the dimension of non-standard reject reasons. However, because the PID language does not specifically address non-standard reject reasons (though it does explicitly focus on standard reject reasons) Qwest believes the PID provides sufficient support for its interpretation and does not currently have plans to modify the method for this diagnostic measurement.

Qwest should review its interpretation through the appropriate process with the state commissions.

Finding 6: Qwest occasionally classified retail trouble reports incorrectly (i.e., as wholesale records with an unknown company ID), and then excluded these records from the calculation of the Repair Appointment Met (MR-9) measure. Classification: 2 (Preliminary Finding #6)

While examining the data used in the calculation of the MR-9 measure for December 2004, Liberty found that Qwest misclassified 35 retail trouble report records as wholesale records.²⁹⁹ As such, these 35 records were assigned an exclusion code of 31 ("Invalid CLEC"), and were excluded from the calculation of the MR-9 measurement results.

When Liberty requested additional information on why these 35 records were classified as wholesale records, Qwest stated the following:³⁰⁰

Of the 35 unknown CLEC records, 21 are for LNP which is not reported in MR3, 4, 5, 6, 7, 8, 9, or 10 and do not use the MTAS CLEC_ID methodology (see response to DR 04-165).

²⁹⁷ Response to Data Request #137.

²⁹⁸ Response to Preliminary Finding #5.

²⁹⁹ Liberty determined that these were retail records by using the "CUSTN" (customer name) field in the MTAS Ad Hoc file provided by Qwest in response to Liberty's Data Request #67.

³⁰⁰ Response to Data Request #166.

The remaining 14 unknown CLEC records represent 0.01% of the total records reported in MR-9, an extremely low percentage. Nine of 14 records were flagged as wholesale due to a manual order processing errors resulting in the product being assigned to a wholesale only product (which overrides market unit). The remaining 5 records appear to have an error in the assign of market unit (MUID).

Qwest believes that extremely low incidence of non LNP unknown CLEC records does not warrant further investigation.

Liberty agrees that the 21 local number portability (LNP) records would not have been used in the calculation of the MR-9 measurement results even if they were classified correctly as a retail record because LNP is not a valid product disaggregation for this measure. Liberty also agrees that the remaining 19 records that were misclassified represented a very small percent of the total records for December 2004. However, Liberty believes that there may be circumstances in which the impact could be more significant, given that the reason for the manual processing errors is unknown.

In response, Qwest stated the following:

Qwest has analyzed the MTAS data for the months from October 2004 through March 2005. In every month, the volume of records which are not LNP but have an unknown CLEC represents .01% of the total records. As with anything involving human handling, a small percentage of error is reasonable to expect. Therefore, Qwest does not plan to take further action in this area.³⁰¹

Liberty concurs that, given the current scale of this problem, which occurs as the result of human processing error, further action by Qwest is not warranted.

Finding 7: Qwest did not use the correct retail product as the parity standard for the wholesale “Non-Loaded 2-Wire Loop” product disaggregation when calculating the New Service Installation Quality Reported to Repair (OP-5A) measure. Classification: 1 (Preliminary Finding #7)

According to version 8.0 of the PID for the OP-5A measure, the Non-Loaded 2-Wire Loop and the Unbundled ISDN Capable Loop both have the same retail analog as the performance standard (*i.e.*, parity with retail ISDN-BRI). However, while performing its replications of the OP-5A measure for December 2004, Liberty found that Qwest was using the retail results for the ISDN-BRI designed and the ISDN-BRI non-designed products as the retail analog for Non-Loaded 2-Wire Unbundled Loops. Liberty also found that Qwest was using the retail results for only the ISDN-BRI designed product as the retail analog for Unbundled ISDN Capable Loops. When Liberty requested additional information from Qwest on why Qwest processes the results

³⁰¹ Qwest response to Finding #6, provided on July 21, 2005.

for these two wholesale products using different retail analogs, Qwest confirmed that the current calculated retail analog for Non-Loaded 2-Wire Unbundled Loops is not correct. Similar to that for the Unbundled ISDN Capable Loops, the retail analog should include only ISDN-BRI designed.

For December 2004, there were a total of 509 ISDN-BRI design retail orders and eight ISDN-BRI non-design retail orders. The retail OP-5A result when combining these two products was 95.74 percent. The OP-5A retail result using ISDN-BRI design only was 95.68 percent. Thus, for December 2004, the impact of incorrectly including the non-design ISDN-BRI orders in the calculation of the analog product for Non-Loaded 2-Wire Loops was minimal. However, Liberty believes that there may be circumstances in which the impact could be more significant.

Qwest indicated that it agreed with this finding and implemented the required programming change to fix it with June 2005 data. Qwest also indicated that it included this change in a previously scheduled run back to December 2004, correcting this problem for December 2004 forward.³⁰²

Finding 8: Qwest's documentation of the parity performance standards for unbundled loops in the New Service Installation Quality Reported to Repair (OP-5A) measure was unclear and misleading. Classification: 4 (Preliminary Finding #8)

Liberty found that Qwest was using a different retail analog for two wholesale products, Unbundled ISDN Capable Loops and Non-loaded 2-Wire Loops. According to version 8.0 of Qwest's PID, these products should have the same parity standard. When Liberty requested additional information from Qwest on why Qwest processes the results for these two wholesale products using different retail analogs, Qwest stated that the correct analog for both of these wholesale products is retail ISDN-BRI designed services only.³⁰³ Qwest's rationale for this is that the two wholesale products identified by Liberty are "only reported under the zone type disaggregation in the other OP PIDs."³⁰⁴

Liberty subsequently asked Qwest to explain why Qwest applied the Zone-type disaggregation to the Unbundled ISDN Capable Loop and the Non-loaded 2-Wire Loop products when the OP-5 measure is not reported with the MSA and Zone-type disaggregations as are the OP-3, OP-4, and OP-6 measures.³⁰⁵ In reply, Qwest stated that "unbundled loops always follow the design provisioning flow and are therefore reported in the Zone-type disaggregations."³⁰⁶

³⁰² Response to Preliminary Finding #7.

³⁰³ For wholesale Non-Loaded 2-Wire Loops Qwest was incorrectly using both retail ISDN-BRI designed and non-designed service as the parity performance analog.

³⁰⁴ Response to Data Request #147. In Qwest's PID documentation for the OP-3, OP-4, and OP-6 measures these two products, as well as all the other unbundled loop products, are reported under a "Zone-type" disaggregation. According to the PID documentation for these three measures "Zone-type" disaggregation involves only services that use "designed provisioning." For these three measures the products that use non-designed provisioning are reported under a "MSA-type" disaggregation.

³⁰⁵ In response to Data Request #147 Qwest stated; "OP-5 is not reported with the MSA and Zone disaggregations."

³⁰⁶ Response to Data Request #176.

A plain reading of the PID documentation for the OP-5A measure does not indicate that Unbundled Loops always follow design provisioning and, therefore, are reported in the Zone-type disaggregation. The documentation, as it is currently written, makes no distinction between Zones, MSAs, designed services, or non-designed services. This could be interpreted to mean that these distinctions do not matter when calculating the retail analog results. This lack of clarity in Qwest's PID documentation for the OP-5 measure does not provide the reader of the documentation with a definitive understanding of exactly what products Qwest uses as the retail comparative for the Unbundled Loop products.

In response, Qwest stated the following:

In the 271 workshops and Technical Advisory Group ("TAG") meetings that were the part of the 271 OSSs Tests (both the ROC and Arizona tests), the parties extensively discussed what constituted proper retail analogs. With respect to the retail analogs for unbundled loops in the provisioning measurements ("OP PIDs"), the parties arrived at a common understanding that unbundled loops follow the designed services provisioning flow, not the non-designed provisioning flow, and that there are significant operational differences between the two provisioning processes. All unbundled loop disaggregations in all of the OP measurements align with retail products that also follow the designed services provisioning flow except for analog loops. This exception is because an analog loop is a basic offering that corresponds more closely with the RES/BUS POTS with dispatch, which follows the non-designed provisioning flow, than other retail services that follow the designed services provisioning flow. All other unbundled loop disaggregations in the OP PIDs have a closely related retail service that also follows the designed services provisioning flow. This correspondence between the other unbundled loops (not analog loops) and their retail analogs in the designed services provisioning flow, maintained throughout the OP PIDs, reflects the parties' common understanding that aligning a retail product in the same provisioning flow as its corresponding unbundled loop is the better comparison.

With this common history, the parties negotiated revisions to OP-5 and completed their negotiations in 2003 and further modified OP-5 more recently in 2004 in the Long Term PID Administration forum. All discussions regarding the proper retail analogs for non-loaded two-wire loops and ISDN-capable loops reported in OP-5 were consistent with the historical understanding set forth in the above paragraph. At no time, did the parties discuss deviating from precedent and matching retail analogs from the non-designed and designed services provisioning flow to the two types of unbundled loops in question that are solely provisioned in the designed services provisioning flows. Such a suggestion would have sparked an extensive debate because such a comparison would have resulted in an improper retail analog.

Taking note of the Auditor's belief that the PID could be clarified, Qwest is willing to clarify the PID language to indicate the ISDN BRI retail analog follows the designed services provisioning flow; however, such a clarification will require filings to modify the Exhibit B of Qwest's SGATS in all 14 states within Qwest's local service region. Qwest is willing, when the next appropriate opportunity arises, to pursue this clarifying change.

Qwest should revise the language in the PID to clearly state that the OP-5 retail analog for all Unbundled Loops follows the designed services provisioning flow and, therefore, uses the zone type disaggregations.

Finding 9: Qwest did not implement a requirement of the Manual Service Order Accuracy (PO-20) PID that service orders created from CLEC Local Service Requests (LSRs) must be received and completed in the same version of IMA-GUI or IMA-EDI. Classification: 1 (Preliminary Finding #9)

Note 1 for PO-20 states that to be included in the measurement, service orders created from CLEC LSRs must be received and completed in the same version of IMA-GUI and IMA-EDI. Note 1 was to be effective for PO-20 Phase 1 and beyond.

Qwest stated that the code used to produce the PO-20 results is only validating that the PON version ID³⁰⁷ is equal to or greater than IMA 15.0. Qwest is in the process of making changes to the code to include a comparison that all three fields (PON version ID, Client version ID,³⁰⁸ and Current version ID³⁰⁹) are the same to determine whether the order is eligible to be included in the results.³¹⁰

Based on a subset of PO-20 data from December 2004, Liberty estimates that approximately four percent of the records should have been excluded from the results in cases where the three fields mentioned above did not match. That amount is likely to vary in other months, particularly when there is an IMA release during the month.

Qwest agrees with the finding and stated that they have corrected the PO-20 code to only count orders created from CLEC LSRs that are received and completed in the same version of IMA-GUI or IMA-EDI, beginning with the June 2005 data reported in August 2005. Qwest will investigate historical impacts of this finding to determine whether a rerun of prior months is required.³¹¹

³⁰⁷ PON version ID identifies the original version of IMA-GUI or IMA-EDI through which the PON was submitted.

³⁰⁸ Client version ID identifies the version of IMA-GUI or IMA-EDI through which a particular LSR was submitted.

³⁰⁹ Current version ID identifies the version of IMA-GUI or IMA-EDI in which the CLEC is operating at a particular stage in the lifecycle of the service order.

³¹⁰ Response to Data Request #157.

³¹¹ Response to Preliminary Finding #9.

Finding 10: Qwest did not exclude all non-bill impacting records that originate in IABS from the Billing Completeness (Resale and UNE) (BI-4A) measure. Classification: 2 (Preliminary Finding #10)

Qwest uses source data from MCAS and IABS to calculate the BI-4A measure. The source systems assign a bill impact indicator value to each billing record they send to PANS. An indicator value of "N" means that the record is non-bill impacting, which means it is associated with a service order having no recurring or non-recurring charges associated with it. For example, a billing address change would be of this type.

Qwest began using the bill impact indicator to exclude non-bill impacting records from BI-4A results beginning with the January 2004 data month. This exclusion is appropriate because such bills have no charges associated with them, and the PID notes that BI-4A "measures the percentage of non-recurring and recurring charges associated with completed service orders." Qwest assigns an exclusion code of 118 to records with a bill impact indicator of "N" and excludes them from its calculation of results. Liberty found that Qwest assigned the exclusion code to CRIS records, but not to IABS records. Typically, while there are many non-bill impacting IABS records, Qwest's process usually excludes them because they pertain to an invalid product. However, the process still included other non-bill impacting IABS records in reported results during 2004.

In its replication of Washington results for December 2004, Liberty found that one non-bill impacting IABS record was incorrectly included in reported results. The denominator for the state was over 30,000, and thus the error had a negligible effect. Qwest stated that it found 11 wholesale and retail records in the regional December 2004 data that were incorrectly included in results, and stated that there was no PAP monetary effect region-wide. Liberty believes there may be circumstances in which the effect could be greater.

Qwest acknowledged that these IABS records should be excluded, and indicated that it opened a change request to correct the problem for the July 2005 reporting month.³¹² Qwest also stated that it would analyze the impact of the problem on 2004 reported results, but expected that a rerun would not be necessary.³¹³

Finding 11: Qwest omitted the UNE-P (Centrex 21) product from the Manual Service Order Accuracy (PO-20) results beginning with the December 2004 reporting month. Classification: 2 (Preliminary Finding #11)

The PO-20 PID lists two product reporting categories:

- Resale and UNE-P (POTS and Centrex 21)

³¹² Response to Data Request #181 and response to Preliminary Finding #10. For the December 2004 reporting month, the error affected the state of Washington only, where one IABS record was incorrectly included in reported results.

³¹³ Response to Preliminary Finding #10.

- Unbundled Loops (Analog and Non-Loaded 2/4-Wire, DS1 Capable, DS3 and higher Capable, ADSL Compatible, XDSL-1 Capable, ISDN-BRI Capable).

When implementing the code changes to exclude products that are part of the QPP commercial agreements (QPP_POTS, QPP_CTX21), Qwest omitted UNE-P (Centrex 21) products that were not part of the commercial agreements.³¹⁴ Qwest should, however, include these in the Resale and UNE-P (POTS and Centrex 21) reporting category. The UNE-P (POTS) product was properly included.

In its evaluation of PO-20 data from December 2004, Liberty calculated that Qwest omitted 104 service order records (about 1 percent) from the regional results, 102 of which would be considered accurate (*i.e.*, counted in the numerator). The majority of the omitted records were concentrated in Minnesota (49) and South Dakota (27). Even if Qwest had included all the records, there would be no change in any state's pass/fail status for the December 2004 reporting month. Liberty believes there may, however, be circumstances in which the effect could be greater in other months or for an individual CLEC.

Qwest agreed with the finding and corrected the code to include the Centrex 21 product, beginning with the June 2005 data reported in August 2005. Qwest investigated the impacts of the finding for the most recent month of April 2005 and found that a restatement of the PO-20 results is not warranted.³¹⁵

Finding 12: Qwest did not input the benchmark for the Installation Interval – Dispatches within MSAs (OP-4A & OP-4B) measures for the Line Splitting product. Classification 1 (Preliminary Finding #12)

As part of its audit of QPAP payments, Liberty reviewed how Qwest determined the standard used for all measures used in the QPAPs in the May and December 2004 data months. Liberty compared the standard as defined in the QPAPs and PIDs with the input file Qwest uses for payments. Liberty found that, in December 2004, the penalty input file listed the OP-4 measure for product code "LINE_SPLIT" as a parity measure. However, as specified in the PID for this measure, the Line Splitting product has a benchmark standard of 3.3 days.

Liberty subsequently reviewed all calculations associated with OP-4A and OP-4B for the Line Splitting product from July 2004 through December 2004. Because no payment was required in most instances, Liberty found only one instance in which Qwest's calculated payment differed from Liberty's.

In Oregon, Qwest paid \$26 to a CLEC for the OP-4A Line Splitting measure in August 2004. However, Liberty calculated that Qwest should have paid \$150.³¹⁶

³¹⁴ Response to Data Request #185.

³¹⁵ Response to Preliminary Finding #11.

³¹⁶ In Liberty's preliminary finding, Liberty calculated a higher amount of payments, because Liberty did not cap the occurrences at the denominator, as is required in Oregon. Also, Liberty found an issue with Arizona in August 2004,

Qwest responded that the benchmarks for Line Splitting were incorrect, and that the issue was corrected in the March 2005 rerun. The CLEC received \$124 in additional payments.

**Finding 13: Qwest did not have point-to-point controls in place for the transmission of Business Process Layer (BPL) data from IMA to PANS.
Classification: 3 (Preliminary Finding #13)**

Liberty evaluated the quality processes Qwest has in place to ensure that PANS receives all the transaction-level data needed for the calculation of the measures. The LSRs Rejected (PO-4) measure calculations require data from both the CRM and IMA source systems. These data are transmitted to PANS and later extracted by Qwest's Regulatory Reporting group to create the CRM Ad Hoc files. The IMA system provides BPL reject (auto-reject) information. Liberty examined the CRM to PANS transactions and found the quality processes to be sufficient.³¹⁷ However, Liberty found that the IMA to PANS data transfer process has no point-to-point controls in place to ensure that all records sent by IMA were received by PANS on a daily basis.³¹⁸

IMA transfers data to PANS via FTP. To add controls, typically the source system sends the record count in addition to the data. If the number of records received matches the record count sent, then all records have been received and they are subsequently loaded into the destination system.³¹⁹ Qwest has implemented such controls for other FTP data transfers but not for IMA to PANS.

It is not known if the lack of point-to-point controls caused any IMA records to be omitted from PO-4 reporting, but the risk exists. In this case, any missing records would directly impact the PO-4A and PO-4B sub-measures. All records received from IMA, unless otherwise excluded, are considered misses in PO-4A-2 or PO-4B-2 (*i.e.*, auto-rejects to be counted in the numerator and the denominator) depending on whether the records are from IMA-GUI or IMA-EDI respectively. For PO-4A-1 and PO-4B-1, the records would be counted in the denominator only because these sub-measures report the percentage of manual rejects. PO-4C would not be affected because it measures only faxed orders.

Although the LSR Rejection Notice Interval (PO-3) measure is out of scope for this audit, IMA BPL reject data is also used in PO-3A-2 and PO-3B-2 calculations.

Qwest believes that the data transmission technology used by Qwest and in the industry has improved and, as a result, the number of failed or corrupted transfers has dropped dramatically in the last five years. Qwest adds that systems downstream from PANS validate data, as well as analyze, find, and report errors in the few cases that PANS does not catch them. Qwest has

but Arizona had not yet implemented the relevant PID version in August 2004. Thus, Liberty amended the finding to reflect this.

³¹⁷ Interview #15, July, 12, 2005.

³¹⁸ Interview #24, August 4, 2005 and response to Data Request #211.

³¹⁹ Response to Data Request #92.

evaluated the costs associated with implementing a control process with IMA and PANS and in light of the low risk of adverse impact, will not pursue this enhancement at this time.³²⁰

Liberty finds Qwest's approach has some risk but the magnitude of the risk is difficult to quantify. Data transfers from other source systems to PANS that use FTP have implemented the recommended controls. Qwest states that the number of failed or corrupted transfers has dropped dramatically. However, any missing records directly affect PO-4A-2 and PO-4B-2 in a negative way; although PO-4 is a diagnostic measure, this issue also affects PO-3. Liberty believes proper controls should be implemented. Qwest's response did not include the projected cost of implementation.

Finding 14: Qwest did not correctly calculate the Work Completion Notification Timeliness (PO-6) notification interval for orders originating in northern Idaho. Classification: 1 (Preliminary Finding #14)

Qwest provisions service orders through three regional service order processors (SOPs) in each of its operating regions. In its Regional Service Order Repository (RSOR), Qwest captures data on orders received by the three SOPs: Regional Service Order Logistics and Reference (RSOLAR), Service Order Processing and Distribution (SOPAD), and Service Order Logistics and Reference (SOLAR). Qwest uses RSOLAR for the western region states of Washington, Oregon, and a small portion of northern Idaho, and records service order completion times in Pacific Time. Qwest uses SOPAD for the central region states of Arizona, Colorado, New Mexico, Montana, Utah, Wyoming, and most of Idaho, and records service order completion times in Mountain Time. Qwest uses SOLAR for the eastern region states of Iowa, Minnesota, North Dakota, South Dakota, and Nebraska, and records service order completion times in Central Time.³²¹ Qwest uses the same SOP time stamp convention for each order from a state in a given region, regardless of the actual time zones in the state. While events in the SOPs are time-stamped differently depending upon the SOP, Qwest records notifications in Mountain Time, regardless of state.

Before RRS calculates the notification interval, it adjusts the service order completion times for the time zone differences for orders from states that were not recorded in Mountain Time. Qwest's program adds an hour to the service order completion time for those orders associated with LSRs recorded in Pacific Time.³²² However, Qwest's program makes this adjustment for Washington and Oregon orders only, and makes no associated change for orders from the small northern portion of Idaho that are also recorded in Pacific Time.

The calculated notification intervals used in PO-6 for orders from northern Idaho are one hour longer than the actual notification intervals, because Qwest does not make the time zone adjustment for these orders. Qwest acknowledged that it treated orders from northern Idaho as if they were from the central region (and thus in Mountain Time). Qwest investigated the impact of

³²⁰ Response to Preliminary Finding #13.

³²¹ Response to Data Request #152.

³²² The program subtracts an hour from those orders recorded in Central Time.

having Idaho orders processed by two different SOPs.³²³ Qwest found that of the 209 LSRs it reported for PO-6A for December 2004, 33 or 15.8 percent were from this northern portion of Idaho. Qwest found that of the 897 LSRs it reported for PO-6B for December 2004, 28 or 3.1 percent were from this portion of Idaho.³²⁴ As such, Qwest's actual performance for Idaho is slightly better than it reported.³²⁵ For example, Qwest reported an average interval of 47 minutes for PO-6A for Idaho in December 2004. Liberty estimated that the average would drop to 37 minutes if the effect of the additional 33 hours of interval time (for the 33 northern Idaho LSRs) was removed. Liberty believes that the error will not meet Qwest's standard for reposting of results.

In response, Qwest stated that the situation could be rectified by using a wire center table to assign Idaho LSRs to the appropriate time zone. Qwest stated that it plans to incorporate the enhancement for the September 2005 reporting month, and that it will rerun prior month results as required.³²⁶

Finding 15: Qwest's implementation of the Nebraska, Iowa, Montana, New Mexico, Wyoming, and South Dakota QPAPs did not allow for escalation of Tier 1 payments beyond 24 months. Classification: 2 (Preliminary Finding #15)

As part of its audit of QPAP payments, Liberty reviewed how Qwest implemented the Tier 1 payments to CLECs. Liberty compared the standard as defined in the QPAPs with the Qwest payment reference tables. Qwest uses these reference tables and the performance measure results to calculate penalty amounts. Liberty found six states in which the Qwest did not implement the Tier 1 payment escalation described in the QPAP. According to the QPAPs for Nebraska, Iowa, Montana, New Mexico, Wyoming, and South Dakota, payments for measurement groups high, medium, and low would increase by \$100 for each month following month six in which Qwest continues to deliver substandard performance for the measure. Qwest's reference tables for these states cause a payment increase for each month after the sixth month but the increase ends at month 24. The QPAP, however, does not state that the \$100 monthly increase contains a cap.³²⁷

None of these errors resulted in incorrect payments to CLECs in 2004. However, incorrect payments stemming from these errors could occur in the future.

In response, Qwest explained that they had introduced a new reference table design that would allow the proper escalation of payments and fix this problem.³²⁸ Liberty believes Qwest has taken the necessary steps to resolve this issue.

³²³ Idaho is unique in that it is served by two different SOPs.

³²⁴ Response to Data Request #188.

³²⁵ The standard for PO-6 is six hours. Qwest reported December 2004 results for PO-6A of 47 minutes, and for PO-6B results of 1 hour and 45 minutes.

³²⁶ Response to Preliminary Finding #14.

³²⁷ This Finding differs from Liberty's Preliminary Finding #15 in that an additional issue regarding Wyoming was found to be an oversight on Liberty's part, and not an incorrect reference table entry.

³²⁸ Response to Preliminary Finding #15.

Finding 16: The Nebraska payment reference table for Tier 2 payments listed payment amounts to state funds that were not consistent with the Nebraska QPAP. Classification: 2 (Preliminary Finding #17)

Table 4 of the Nebraska QPAP Exhibit K (page 8) lists Tier 2 payment amounts to state funds that do not correspond with the amounts contained in the Qwest payment reference table. The following table summarizes the differences.

Nebraska Tier-2 Payments to State Funds

Month	Payment According to:	Per Occurrence ("Low")	Per Measurement Cap ("Low")
3	QPAP	\$200	\$20,000
	Qwest Reference Table	\$100	\$15,000
4	QPAP	\$300	\$25,000
	Qwest Reference Table	\$200	\$20,000
5	QPAP	\$400	\$30,000
	Qwest Reference Table	\$300	\$25,000
6	QPAP	\$500	\$35,000
	Qwest Reference Table	\$400	\$30,000

These errors did not result in incorrect payments to state funds in 2004. However, incorrect payments stemming from these errors could occur in the future.

Qwest acknowledged this error, and sent Liberty a revised reference table that does not contain this error.³²⁹

Finding 17: The Washington payment reference table for Tier 1 payments to CLECs for specific products listed "DS1 – LIS-ISP," but that product was not included in the payment input files. Classification: 2 (Preliminary Finding #18)

Table 2A of the Washington QPAP Exhibit K (pages 6-7) lists the Tier 1 payments for specific products, including DS1 – LIS-ISP. The payment input files provided by Qwest, however, do not list this product for any month in 2004. In addition, the Ad Hoc Master Files provided by Qwest for May and December 2004 do not contain this product. Finally, the Qwest payment reference table also does not include the product.

Because the Ad Hoc Master Files do not include this product, Liberty cannot determine whether Qwest should have made any payments related to this product.

³²⁹ Response to Preliminary Finding #17.

In response, Qwest stated:³³⁰

Liberty is correct that the product DSI – LIS-ISP does not exist. The LIS product does not distinguish between ISP and non-ISP installations, and there is no requirement in the PID document (Exhibit B of the WA SGAT) or the WA PAP (Exhibit K) to do so. Table 2A was inserted in the WA PAP as a result of a Commission decision to adopt a CLEC proposal regarding payment differentials for hi-cap services; this proposal was not drafted specifically to Qwest's list of offered products. Nevertheless, Qwest notes that the same per occurrence amounts are specified for DSI – LIS-ISP and the DSI – LIS product that is applied to LIS measures in the WA PAP.

Liberty believes this issue is one that needs to be clarified between Qwest and the state of Washington. Because the Washington QPAP has the product listed in the Table 2A of Exhibit K, Liberty believes the product should be included. However, from Qwest's response, Qwest believes that the disaggregation of this product is not required. Liberty is not in a position to determine whether the state of Washington intended to create a disaggregation that did not exist in the PID or only intended to include the product as part of the QPAP.

Finding 18: The RRS documentation of Qwest's processes and methods for calculating its performance measures contained errors, and was not up to date. Classification: 3 (Preliminary Finding #19)

Qwest provided Liberty with the December 2004 version of its Regulatory Reporting Systems (RRS) documentation that describes the processes and methods Qwest uses to calculate performance measure results.³³¹ Liberty found that the RRS documentation for the in-scope measures contained errors and omissions. For example:

- The documentation did not reflect the reference tables used to derive key fields found in the OP5A Ad Hoc file.³³²
- The documentation regarding Maintenance and Repair reflected an exclusion code (d_except type 32) that is no longer valid.³³³
- The description of the criteria necessary for a transaction to qualify for an OP-5 exclusion was unclear and misleading.³³⁴
- The documentation omitted PO-4C and its diagnostic status.³³⁵
- The description of the data sources for the PO-4 measure was misleading, stating that the data are extracted from PANS CRM and EXACT, and was unclear regarding the IMA data source for auto-rejects.

³³⁰ Response to Preliminary Finding #18.

³³¹ Response to Data Request #1.

³³² Qwest provided updated documentation that reflected these tables in response to Data Request #32.

³³³ Qwest provided updated documentation that removed this exception in response to Data Request #99.

³³⁴ Qwest provided updated documentation to clarify the description of "the product on order and ticket don't match (MBIT) exclusion" in response to Data Request #226.

³³⁵ Qwest provided updated documentation to rectify the omission in response to Data Request #42.

- The descriptions for certain PO-4 derived fields did not reflect the use of the po3_4flg field and treatment for records that are not a general reject.³³⁶
- The description of the PO-4 measure calculation was inaccurate and did not include the prod_cd variable in the formulas.³³⁷
- The documentation provided no description for the prod_cd field (used in the formulas for PO-20) or for some derived fields (e.g., lastord and phase2) that are important to the calculation of PO-20.³³⁸
- The documentation for PO-20 does not list test CLEC as a common exclusion.
- The documentation listed formulas for calculating the PO-6 sub-measures that were incorrect.³³⁹
- The description of exclusion code 32 used in the calculation of the PO-6 measures is incorrect and inconsistent with its programs.
- The documentation showed the calculation of PO-7C using a PO7C indicator flag, which is not a field in the Ad Hoc file.³⁴⁰
- In its description of how certain fields are derived in the calculation of PO-7, Qwest refers to data fields that are not defined in the documentation and are not in the Ad Hoc files.³⁴¹
- The documentation for BI-4B described the extraction process from PANS as monthly rather than daily, and made no reference to the 62-day rolling Ad Hoc file.
- The description of the BI-4B exclusion code field was incorrect, as were the descriptions of certain BI-4B exception types.³⁴²

Liberty also found that Qwest had not yet updated its documentation for all in-scope measures to discuss how it excludes QPP products and commercial Line Sharing under commercial agreements.

Liberty believes that incorrect documentation can lead to confusion and potential processing errors by the internal users of the documentation. It also makes it difficult for external users of the documentation (e.g., auditors and regulators) to get a clear understanding of Qwest's regulatory reporting system process. In most cases, Qwest has already made corrections to its documentation as a result of Liberty's audit, but more are needed.

³³⁶ Qwest provided updated documentation to update field descriptions in response to Data Request #186.

³³⁷ Qwest provided updated documentation to update measure calculations in response to Data Request #187.

³³⁸ Qwest provided updated documentation to rectify the prod_cd omission in response to Data Request #61.

³³⁹ Interview #1, April 27, 2005. The documentation shows formulas containing PO-6 indicator flags, which are not actually used to select records for the numerator and denominator. Qwest agreed that it needed to correct these errors.

³⁴⁰ Qwest provided updated documentation in response to Data Request #249, but this documentation contained additional errors regarding the derivation of PO-7A and PO-7B flags.

³⁴¹ Specifically, Qwest uses the POSTTIME and SENTTIME fields as part of its definitions for LIT_DATE and NTFYDATE.

³⁴² Interview #8, June 15, 2005. Qwest agreed that it needed to correct these errors.

In response to Liberty's finding, Qwest agreed that there were errors and omissions in its documentation.³⁴³ Qwest stated that its documentation was intended as a reference for internal clients, and, while the documentation has proven to be a useful resource for auditors, it was not originally intended for that use. Qwest noted that it makes regular updates, typically quarterly, to its technical documentation, and stated that it recognized the need for continuous improvement in the documentation. Qwest acknowledged that it was appropriate to make note of the handling of QPP and commercial Line Sharing in the chapter of the RRS documentation related to affected measures, but made no suggestions for making its current documentation clearer on this issue. Liberty believes that the treatment should be made explicit in the documentation for each affected measure.

Finding 19: The Service Order Validation (SOV) logic allowed some non-inward activity service orders to be included in the calculation of the Manual Service Order Accuracy (PO-20) performance measure. Classification: 2 (Preliminary Finding #21)

The PO-20 PID language specifies that only service orders with inward line or feature activity (*i.e.*, change, new, and transfer orders) are to be included in the measurement.

During its review of the December 2004 PO-20 Ad Hoc file, Liberty discovered a service order that should not have been included in PO-20 results because it was not an order for inward activity. According to Qwest's process, partial disconnects often result in a "C" (change) order when they are actually retail disconnect activity. In this case, there was a partial conversion of a retail account to wholesale products. The order completed with no SOV-identified mismatches. Qwest included the record as an accurately processed service order, when it should not have been included in the results for PO-20.³⁴⁴

The reason SOV reviewed the C order for outward activity was a flaw in the SOV logic relating to partial conversions in which C and "N" (new) orders are issued rather than "D" (disconnect) and N orders. The existing SOV logic could not determine that the C order was outward activity because it contained both change (actually partial disconnect) and transfer activity, which are criteria that SOV uses to determine an inward line.³⁴⁵

Liberty found only one order of this type using a non-random sample of the December 2004 PO-20 Ad Hoc files during its data validation activities. This type of order is difficult to identify and, consequently, difficult to quantify. The proper removal of these records from the PO-20 measure calculation is not likely to have a significant effect on the results (unless the actual number of records is a significantly higher percentage than the sample showed) because both the numerator and denominator would be affected on a measure that has a high success rate.

³⁴³ Response to Preliminary Finding #19.

³⁴⁴ Interview #25, August 8-10, 2005.

³⁴⁵ Response to Data Request #254.

Qwest stated that the final change to the SOV logic to remove the C orders with outward activity from PO-20 was implemented on July 9, 2005.³⁴⁶ Qwest believes that PO-20 data, as of July 11, 2005, should not contain any C orders with only outward activity. Qwest does not have plans to rerun prior months' results because the SOV logic changes cannot be applied to service orders that completed before the code updates were effective. Therefore, a manual review of all C orders to identify those orders that contain only outward activity would be required. Qwest does not consider a manual review feasible because it is labor intensive, prone to human error, and would require manual manipulation of the master data files to rerun results.

**Finding 20: Qwest's manual error code override process required an error code override before a jeopardy notice could be sent, occasionally resulting in a misreporting of the Manual Service Order Accuracy (PO-20) results.
Classification: 2 (Preliminary Finding #22)**

Qwest personnel review the output of the SOV results prior to service order completion and have the opportunity to correct service order errors. Some authorized personnel can issue an error code override when special circumstances within the order justify the mismatch identified by the SOV. This happens primarily because the SOV program is not sophisticated enough to handle every situation. There are many situations in which an override is justified.³⁴⁷ If the Qwest personnel override all error codes for an order, it counts as an accurate order for reporting purposes.

During a review of the PO-20 Ad Hoc file, Liberty found an example of a service order in which Qwest applied an error code override to a legitimate mismatch. In this instance, Qwest correctly applied the override, in accordance with its process, to allow a jeopardy notice to be sent to the CLEC indicating the need to correct an error in the LSR. However, Qwest failed to cancel the order when it did not receive from the CLEC the expected supplemental LSR correcting the error. Because an override had already been issued for that error code, the service order was improperly counted as accurate in PO-20 processing. In fact, this was a legitimate LSR/SO mismatch that was not corrected.³⁴⁸ The reporting software assumes the override is correct, and treats the corresponding service order as accurate in calculating PO-20

The forcing of error code overrides to allow jeopardy notices to be issued appears to be a process requirement, not a human error. Orders of this type would degrade Qwest's PO-20 performance if properly counted as misses.

Liberty found only one order of this type using a non-random sample of 35 records with error code overrides from the December 2004 PO-20 Ad Hoc files during data validation activities. In Qwest's December 2004 PO-20 Ad Hoc file, 2.3 percent of the records contained SOV-identified mismatches with error code overrides. Time intensive analysis would be required to identify all error code overrides that were incorrectly counted as accurate in PO-20 and determine the impact on reported results.

³⁴⁶ Response to Preliminary Finding #21

³⁴⁷ Interview #20, July 29, 2005.

³⁴⁸ Interview #23, August 8-10, 2005.

Qwest responded that the service order should never have been included in the results for several reasons, i) Qwest should have rejected the LSR up front due to the CLEC input error, ii) the CLEC should have issued a supplemental LSR when it received Qwest's jeopardy notice, and iii) Qwest should have cancelled the service order when no supplemental LSR was received.³⁴⁹ Liberty agrees with Qwest's assertion that the service order would not have been included in the results if the LSR had been properly rejected, supplemented, or cancelled. But the fact remains that the service order was allowed to complete and was counted as accurate in PO-20 despite the fact that SOV properly identified a service order mismatch. Qwest also asserts that such situations are uncommon anomalies. Liberty believes this statement is likely to be true but has no way to confirm it without a time intensive analysis.

Finding 21: Qwest personnel improperly issued some Service Order Validation (SOV) error code overrides that may have resulted in the inaccurate reporting of the Manual Service Order Accuracy (PO-20) performance results. Classification: 2 (Preliminary Finding #23)

Qwest personnel review the output of the SOV results prior to service order completion and have the opportunity to correct service order errors. Some authorized personnel can issue an error code override when there are special circumstances within the order that justify the mismatch identified by the SOV. This can happen primarily because the SOV program is not sophisticated enough to handle every situation. There are many situations in which an override is justified.³⁵⁰ If the Qwest personnel override all error codes for an order, it counts as an accurate order for reporting purposes.

During a review of a sample of service orders containing SOV error codes with manual overrides, Qwest and Liberty identified a number of examples of improper error code overrides caused by human error.³⁵¹ The service orders were improperly counted as accurate in PO-20 processing. In fact, these were legitimate LSR/SO mismatches that were not corrected. The reporting software assumes the overrides are correct, and treats the corresponding service orders as accurate in calculating PO-20.

Using the non-random sample of SOV records from Liberty's validation work, there were 35 service order records with error code overrides. Of these, 26 were overridden for legitimate reasons. There were eight orders with nine examples of improper overrides that could be classified as human error (one order had two unrelated improper overrides).³⁵² Orders of this type would degrade Qwest's PO-20 performance if properly counted as misses.

³⁴⁹ Qwest response to Preliminary Finding #22.

³⁵⁰ Interview #20, July 29, 2005.

³⁵¹ Interview #25, August 8-10, 2005 and Interview #28, August 22, 2005. Examples include mixing up NPA and NXX, not including NPA, improper USOCs, wrong application date, and invalid non-pub listings. Detailed examples can be found in Qwest's response to Data Request #221.

³⁵² One other service order was the subject of an improper override due to a process problem. See Liberty Finding 20.

In Qwest's December 2004 PO-20 Ad Hoc file, 2.3 percent of the records contained SOV-identified mismatches with error code overrides. Based on the non-random sample reviewed, a significant percentage of these overrides are probably not valid. Time intensive analysis would be required to identify the improper error code overrides and to determine the impact on reported results for PO-20.

Qwest agreed that the cause of invalid error code overrides is human error, but believes that the volume of such errors is now within reasonable and acceptable ranges. Qwest also believes that its error code override processing significantly improved in 2005 because its personnel have more experience with the process and Qwest has implemented quality initiatives. Qwest also reiterated that Liberty's sample was not random and more analysis is needed to determine the true impact to the PO-20 results.³⁵³ Qwest performed its own internal study to look at the number of improper error code overrides in a typical operational day.³⁵⁴ Based on this study, Qwest estimates the impact of the improper error code overrides to be 0.29 percent.³⁵⁵ Liberty's sample of transactions used in reviewing Qwest's SOV process was not designed for the purpose of estimating the magnitude of the improper error code override issue, but was instead designed to review a variety of error code types, including many error code types that are not frequently encountered. However, Liberty cannot confirm Qwest's assertions and error estimate without further study and validation.

Finding 22: Qwest software did not properly include all appropriate call center tickets resulting in the inaccurate reporting of the Manual Service Order Accuracy (PO-20) performance results. Classification: 2 (Preliminary Finding #24)

Qwest classifies a service order as accurate if SOV determines that all fields are accurate³⁵⁶ and if no CLEC notifications to the call center have generated call center tickets coded to LSR/service order mismatch. The Regulatory Reporting software checks any CLEC notification to the Qwest call center that results in the generation of a call center ticket coded to LSR/service order mismatch for matching records in the PO-20 Ad Hoc file.³⁵⁷ If it identifies a matching service order record within the interval defined in the PID, then that service order should not be counted as accurate.

As part of data integrity testing, Liberty reviewed a sample of call center tickets to confirm that all eligible matching call center tickets were properly included in the PO-20 Ad Hoc file.³⁵⁸ Liberty identified a call center ticket that was improperly omitted.³⁵⁹ For this particular ticket, the state field was not populated. The service order record that matched the ticket should have been

³⁵³ Response to Preliminary Finding #23.

³⁵⁴ To perform its internal study, Qwest chose August 16, 2005.

³⁵⁵ Response to Preliminary Finding #23.

³⁵⁶ Subject to error code overrides or Provider Initiated Activities (PIAs).

³⁵⁷ The Call Center Procedures describe how to populate the fields of the call center database. See Response to Data Request #253.

³⁵⁸ Response to Data Request #252.

³⁵⁹ LSR #12692754, call center ticket #25645902, service order number N00269418.

counted as inaccurate in PO-20 reporting. Liberty believes this circumstance to be rare as it found that all other eligible call center tickets provided by Qwest for December 2004 and January 2005 had the state field populated and were properly processed in the December 2004 PO-20 Ad Hoc file.

In response, Qwest stated that it agreed with Liberty's finding.³⁶⁰ Qwest determined that of the 1,425 eligible call center tickets in 2005, a total of nine tickets or 0.01 percent had a blank state code. Qwest attributes the blank state code to an invalid telephone number being entered when the call center tickets were created. Qwest investigated the call center ticket that had been improperly omitted and found the code used to match the call center tickets did not match correctly when the call center ticket state code was blank. Qwest corrected the coding error beginning with July 2005 data reported in September 2005, and will rerun prior data if required.³⁶¹

Finding 23: Qwest did not include all eligible EDI billing notifications in the Billing Completion Notices for IMA-EDI (PO-7B) results. Classification: 1 (Preliminary Finding #25)

The PO-7B sub-measure reports billing completeness notification timeliness for service orders associated with LSRs that Qwest receives via EDI. According to the PID, the sub-measure is applicable to only those CLECs that are certified and set up to receive the notices via EDI. According to Qwest, during the December 2004 reporting period, only one CLEC subscribed to receive EDI billing completion notices.³⁶² Qwest therefore reported state-specific results for only one CLEC, and the aggregate CLEC results for each state were the same as the CLEC results.

When Liberty reviewed the December 2004 PO-7 Ad Hoc file that Qwest used to calculate results, Liberty found that not all EDI records associated with the certified CLEC were included in results. A large percentage of these EDI records had an exclusion code of 95, which Qwest's RRS program assigns when there is no available notification date from EDI. For example, of the CLEC's 518 EDI service orders in Arizona, 404, or 78 percent, were marked with the exclusion code of 95 and excluded from reported results.³⁶³

Qwest indicated that there was a coding problem in its RRS program, whereby a merge process is matching some but not all CLEC service orders with billing notification dates. Because the RRS program cannot find a match, it assigns those service records an exclusion code of 95. Qwest stated that it was planning to make a correction to the programming code for the September data month and that it would rerun prior results as required.³⁶⁴ Qwest's reported results for the PO-7B sub-measure are incorrect because it fails to include a large percentage of eligible service orders in reported results.

³⁶⁰ Response to Preliminary Finding #24.

³⁶¹ Supplemental response to Preliminary Finding #24.

³⁶² Responses to Data Requests #142 and #241.

³⁶³ Liberty found similar percentages in other states. For example, Qwest excluded 409 of 528 EDI service orders in Minnesota (77 percent), and 431 of 644 EDI service orders in Oregon (67 percent).

³⁶⁴ Response to Data Request #266.

Qwest subsequently stated that it had conducted an impact analysis and found that the effect on reported results was less than 0.05 percent, and that a rerun of results was therefore not necessary.³⁶⁵ Liberty does not have the raw data necessary to verify Qwest's impact analysis.

Finding 24: Qwest did not have point-to-point controls in place for the transmission of CRIS billing information to MCAS. Classification: 3 (Preliminary Finding #26)

As part of the audit, Liberty is evaluating the quality processes Qwest has in place to ensure that PANS receives all the transaction-level data needed for the calculation of the measures. The UNE and Resale Billing Completeness (BI-4A) sub-measure calculation requires data from both the CRIS and IABS billing systems. Data from CRIS flow first to the Mechanized Administration System (MCAS) data warehouse, and MCAS then sends the data to PANS. Qwest then sends data daily from MCAS and IABS into PANS.

Liberty found that the CRIS to MCAS data transfer process has no point-to-point controls in place to ensure that all records sent by CRIS are received by MCAS, and therefore by PANS, on a daily basis. Qwest confirmed that there are no firm controls in place to assure that MCAS processes all relevant service orders.³⁶⁶ By way of contrast, Liberty examined the IABS to PANS transactions and found that quality process to be sufficient. The data file from IABS contains record counts, and PANS checks to see if it matches these record counts both before and after it loads the data into the PANS Oracle table. It is not known if the lack of point-to-point controls caused any CRIS billing service orders to be omitted from BI-4A reporting, but the risk exists. In this case, any missing records would directly impact the BI-4A sub-measure.

Noting that although MCAS had operational system controls in place to ensure that it was reading the correct files from the CRIS systems each day, Qwest agreed that point-to-point controls were not in place. Qwest stated that the existing controls have not resulted in any actual omissions, and that it will not pursue this enhancement at this time.³⁶⁷

Liberty finds Qwest's approach has some risk but the magnitude of the risk is difficult to quantify. Data transfers from other source systems to PANS, such as that from IABS, have implemented the recommended controls. Liberty believes proper controls should be implemented. Qwest's response did not include the projected cost of implementation.

Finding 25: Qwest incorrectly included PID changes in Minnesota that were not yet approved. Classification: 1 (Preliminary Finding #27)

As part of its audit of QPAP payments, Liberty reviewed Qwest's calculations of Tier 1 and Tier 2 payments, based on the performance measure results and the state QPAPs. In Minnesota,

³⁶⁵ Response to Preliminary Finding #25.

³⁶⁶ Interview #26, August 22, 2005.

³⁶⁷ Response to Preliminary Finding #26.

Liberty found a number of instances where changes in the PIDs were prematurely included in the files used to determine payments. In several of these cases, payments were erroneously made by Qwest.

In response to Data Request #50, Qwest listed several PID changes that affected the Minnesota PAP in 2004. However, in response to Data Request #274, Qwest stated that Minnesota had not yet approved PID 5.0a or any subsequent PIDs, and that Minnesota had no PAP changes affecting payments in 2004. Nevertheless, Liberty found several changes to the reference tables that are used to calculate payments in 2004. Some of these table changes led to payments.

Liberty issued Data Request #278, asking for an explanation of changes to the Minnesota PAP. Liberty included the following table, showing each measure that contained performance measures and product disaggregations that were erroneously updated in 2004, and the payments, if any, made for each measure that was updated.

Performance Measure	Tier 1 Payments relevant to changes	Tier 2 Payments relevant to changes
MR-3D	\$0	\$0
MR-6D	\$600	\$0
MR-7A	\$813	\$87
MR-7B	\$58	\$0
MR-7C	\$569	\$24
MR-7D	\$455	\$0
MR-7E	\$201	\$0
MR-7X	\$0	\$0
MR-8	\$0	\$0
OP-3D	\$0	\$0
OP-4D	\$0	\$0
OP-6-1	\$0	\$0
OP-6-3	\$0	\$0
PO-1A	\$0	\$0
PO-1B	\$0	\$0
PO-20	\$9,672	\$3,226
PO-5B-1	\$1,047	\$890
PO-5B-2	\$236	\$57
PO-5C	\$0	\$0
Total	\$20,036	\$4,789

Qwest responded that it implemented changes in the Minnesota PAP calculations associated with PID versions 5.0a through 8.0 in anticipation of Minnesota Commission action. When the commission did not act on the changes, Qwest began removing some of the changes. However, they did not remove the changes entirely, because to do so, Qwest would have reversed payments that would need to be made again if the Commission approves the changes.

Qwest implemented several PID changes prematurely for Minnesota, which resulted in some erroneous payments. Liberty believes that the MR-7 changes could have resulted in increased or decreased payments. Liberty also believes that the PO-5 changes could have resulted in increased or decreased payments. Liberty believes that the remainder of the changes could only have resulted in Qwest erroneously paying more than was due.

Qwest responded in part by explaining the process it used for implementing the changes across its 14 local service region states and the rationale for this process:³⁶⁸

All of the changes addressed by this finding were agreed upon between Qwest and the CLEC community. Furthermore, the parties agreed that the changes would be implemented in all of Qwest's 14 local service region states. Consistent with the agreements, Qwest modified the reporting system code that produces the monthly 271 Performance Results Reports, which at the time required that all of the changes be made for all 14 states because there was one reporting template that applied to all states; therefore, it was not possible to implement the changes in some states without implementing the changes in other states Qwest filed the necessary changes to Exhibit B with the Commissions and did so in a timeframe so that the changes to the reporting system code and the effective dates of the filings would coincide and meet the parties' expectations that implementation of the changes would be timely....

Moreover, some of the changes required that corresponding changes be made to Exhibit K. Shortly after Qwest made the Exhibit B filings, Qwest also made the necessary Exhibit K filings, again so that implementation and effective dates in the PID and the PAPs could reasonably coincide. These steps were made in good faith, met Qwest's commitment to the CLECs to effectuate the parties' agreement on a region-wide basis and in a timely manner, and reflected a reasonable expectation that Commissions would give effect to the parties' agreements in both Exhibits B and K.

In Minnesota, however, the timeframe when the changes were implemented and took effect in Exhibit B did not coincide with the timeframe when the changes were to take effect in Exhibit K since the Commission has not yet approved changes to the MPAP. When it appeared the Commission would not approve the changes at least until the conclusion of the Wholesale Service Quality issue pending before the Minnesota Supreme Court, Qwest acted to address this situation appropriately.

First, where changes were implemented and resulted in MPAP payments, Qwest did not take measures to recover the payments, although Qwest would have been entitled to do so. These payments, which Liberty observed could only have resulted in paying more than what was due, accrued to the sole benefit of the

³⁶⁸ Response to Preliminary Finding #27.

CLECs that were paid, and not to Qwest. Further payments will not be made until the Minnesota Commission approves the MPAP changes.

Qwest also stated, with respect to the addition of EELs to the measure PO-5:

[T]he addition of EELs to PO-5 was agreed upon by Qwest and the CLECs, and implemented in the PID in a timely manner consistent with that agreement. Additionally, the MPAP payments made for PO-5(b) after the addition of EELs were identical to what they would have been if EELs had not been added with one minor exception. In May, 2005, a \$26 payment would have been made for PO-5B-1 (FOCs provided for electronic/manual LSRs received through the IMA-GUI). A failure to pay \$26 does not have a negative impact to the CLEC and from most perspectives; it would also not be considered material.

Liberty did not have the raw data to do the analysis that Qwest performed on PO-5, and thus cannot comment on the results of Qwest's analysis of prior data. However, because it has not yet implemented PID version 7.0, Minnesota continues to be operating under a PID version that does not include EELs in PO-5. Therefore, the premature addition of EELs may affect the results of PO-5 in Minnesota in the future. In addition, because EELs are part of a larger reporting category rather than a separate reporting category for PO-5, adding EELs to the results may reduce payments, increase payments, or have no effect on payments, depending on Qwest's relative performance between EELs and other products in the reporting category.

Qwest further responded with respect to MR-7:

It is proper, in this instance, to continue reporting and paying on the forward-looking methodology. Unlike the PO-5 situation, the MR-7 change encompassed the entire PID; accordingly, the new calculation methodology replaced the old calculation methodology for all reported products, and the reporting of the old MR-7 ceased when the reporting of the new MR-7 commenced for all 14 states. The new MR-7, reflecting the parties' agreement, was then the only PID with which Qwest can meet its PID reporting obligation and its MR-7 MPAP obligations. It is proper then to make MPAP payments on the PID that reflected the parties' agreement, given the particular circumstances described above, and in anticipation of the final approval by the Commission.

In addition, Qwest responded that the MR-7 change would have only affected payments in the month it was implemented. Liberty agrees with this statement.

Finding 26: Qwest did not include the product disaggregation “EEL_DS1 Capable” in its QPAP payments for New Service Installation Quality Reported to Repair (OP-5A). Classification: 1 (Preliminary Finding #28)

As part of its replication and review of performance measure data for OP-5A, Liberty reviewed the January 2005 Ad Hoc Master Files created by Qwest.³⁶⁹ Liberty reviewed the records in this file for the OP-5A measure and found that the payment record was missing the Enhanced Extended Loop (EEL)-DS1 Capable product in eight states, although Qwest reported performance results for this product in January 2005.³⁷⁰ Liberty did find, however, the performance results for all of these product-state combinations in the Ad Hoc Master File.

In part to address this issue, Liberty issued Data Requests #248 and #274. Qwest explained that when it discovered that OP-5A EEL-DS1 had not been implemented as specified in PID version 5.0a, it implemented the product retroactively. Qwest further explained that it reran the calculations from December 2003 through May 2005 and made payments (with interest) to affected CLECs.³⁷¹ Additionally, Qwest noted that the payments were missing in Arizona and Minnesota because neither state had adopted PID version 5.0a, or subsequent PID versions, for inclusion in their QPAPs during 2004.

Although Qwest failed to make QPAP payments based on the EEL-DS1 product disaggregation of OP-5A during 2004, it subsequently corrected the problem and made payments to the affected CLECs, including interest.

Qwest responded confirming that it implemented the product retroactively, and made payments with interest for the period from November 2003 through May 2005.³⁷²

B. Other Recommendations

Liberty also identified some issues, mainly associated with process or documentation improvement, that it feels are not significant enough to warrant findings but for which it recommends that Qwest consider making changes.

1. With the exclusion codes, Qwest makes additional types of exclusions that are not explicitly stated in the PID for several of the in-scope measures. Liberty believes that the exclusions for test CLEC transactions and for missing or invalid data, such as orders with invalid states, no IMA system identifier, missing notification dates, or missing service order numbers, are reasonable. However, Qwest should consider adding these exclusions to the PID language where they are missing. For example, Liberty suggests that Qwest consider adding to the PO-6, PO-7, and BI-

³⁶⁹ Responses to Data Requests #168 and #235. Liberty used January 2005, because this file contains performance data relevant to the December 2004 PID reporting for OP-5A.

³⁷⁰ The eight states where the EEL-DS1 product was missing from the payment record were: Arizona, Idaho, Minnesota, Montana, Nebraska, New Mexico, Oregon, and Utah.

³⁷¹ Responses to Data Requests #248 and #274.

³⁷² Response to Preliminary Finding #28.

- 4 PID exclusions the phrase it uses elsewhere: "records missing data essential to the calculation of the measurement per the PID."
2. As noted above, Qwest began excluding certain commercial agreement products that are replacements for discontinued UNEs during 2004. Although Liberty finds Qwest's explanation of this change reasonable, Liberty recommends that Qwest discuss these changes with the ROC to make sure that there is understanding of and agreement with the changes.
 3. As noted above, Qwest's documentation is not clear as to what procedure to follow in circumstances requiring a permutation test but in which the test statistic cannot be calculated. Liberty recommends that Qwest consider providing more detail in their documentation about the procedure to follow in this circumstance.
 4. Liberty recommends that Qwest investigate the feasibility of providing the Billing Account Number (BAN) to the CLECs in conjunction with their QPAP payment (for those CLECs that receive their payment by bill credit). If implemented, this should save time for both Qwest and the CLECs by eliminating the frequent calls that are currently necessary to verify payment.

Appendix A: Findings Summaries

The following 13 tables summarize the impact of the findings of this audit separately for each of the 13 states participating in the audit. Each table lists the findings that Liberty believes are applicable to the state, and whether they can affect monthly measure reporting and Tier 1 and Tier 2 payments. Each table lists only those findings that are applicable to a given state. For example, Finding 14 is applicable only to Idaho and is therefore included only in the Idaho table. The tables also indicate whether or not Liberty believes that Qwest concurs with the finding and whether Qwest has or plans to take action to resolve the finding. Finally, the tables include additional clarifying comments.

An "X" in the relevant columns has the following meanings:

- For the "May Affect Measure Reporting" column, an "X" means Liberty believes that the finding has the potential to affect monthly measure reporting for the measures involved in the finding. A blank indicates that there is not likely to be any impact. An "X" does not imply that there was necessarily a material impact during 2004.
- For the "May Affect Tier 1 Payments" column, an "X" means Liberty believes that the finding has the potential to affect Tier 1 payments for the measures involved in the finding. A blank indicates that there is not likely to be any impact. An "X" does not imply that there was necessarily a material impact during 2004.
- For the "May Affect Tier 2 Payments" column, an "X" means Liberty believes that the finding has the potential to affect Tier 2 payments for the measures involved in the finding. A blank indicates that there is not likely to be any impact. An "X" does not imply that there was necessarily a material impact during 2004.
- For the "Qwest Concurs" column, an "X" means Liberty believes that Qwest concurs with the finding. A blank indicates that Liberty believes that Qwest does not concur.
- For the "Qwest Taking Action" column, an "X" means Liberty believes that Qwest has or intends to take some action to resolve the finding. A blank means Liberty does not believe that Qwest intends to take any action. Because the actions generally occur after the 2004 data months, Liberty cannot verify that the action does, in fact, resolve the finding. Also, in some cases Qwest may concur with a finding but has concluded that no action is necessary or that the impact is too small to justify action. In such cases, Liberty indicates in the Comments column whether it concurs with Qwest's conclusions.

Finding Applicability and Status: Arizona

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concurrs	Qwest Taking Action	Comments
1	Qwest's process for calculating New Service Installation Quality Reported to Repair (OP-5A) may ignore troubles on some auxiliary lines.	2	OP-5A	X	X	X	X	X	
2	Qwest is excluding troubles from New Service Installation Quality Reported to Repair (OP-5A) that do not correspond to valid exclusions documented in the PID.	2	OP-5A	X	X	X			Qwest does not agree with this finding, but Liberty recommends that Qwest clarify through the appropriate process with the Commission whether its current process for excluding these trouble reports is compliant with the expectation for this measure.
3	Qwest is excluding LSRs with an "unknown state" data entry from LSRs Rejected (PO-4A and PO-4B) which does not correspond to valid exclusions documented in the PID.	2	PO-4	X				X	Although Qwest does not concur with the finding, it is taking action to mitigate the impact. Liberty recommends that Qwest review its actions with the Commission for concurrence.
4	Qwest did not include all products that should roll up to the "DS3 and Above" product disaggregation when calculating the New Service Installation Quality Reported to Repair (OP-5A) measure.	2	OP-5A	X	X	X	X	X	

Finding Applicability and Status: Arizona

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concurrs	Qwest Taking Action	Comments
5	The PID for LSRs Rejected (PO-4) does not clearly address the treatment of LSRs rejected for non-standard reasons.	4	PO-4						Liberty recommends that Qwest review its PID interpretation with the Commission for concurrence.
6	Qwest occasionally classifies retail trouble reports incorrectly as wholesale records with an unknown company ID, and then excludes these records from the calculation of the Repair Appointment Met (MR-9) measure.	2	MR-9	X					Liberty concurs that no further action is necessary because the impact is small.
7	Qwest did not use the correct retail product as the parity standard for the wholesale "Non-Loaded 2-Wire Loop" product disaggregation when calculating the New Service Installation Quality Reported to Repair (OP-5A) measure.	1	OP-5A	X	X	X	X	X	
8	Qwest's documentation of the parity performance standards for the New Service Installation Quality Reported to Repair (OP-5A) measure is unclear and misleading for unbundled loops	4	OP-5A						Qwest has indicated that it is willing to clarify the PID language at the next appropriate opportunity. Liberty recommends this action.

Finding Applicability and Status: Arizona

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concurrs	Qwest Taking Action	Comments
9	Qwest did not implement a requirement of the Manual Service Order Accuracy (PO-20) PID that Service Orders created from CLEC Local Service Requests (LSRs) must be received and completed in the same version of IMA-GUI or IMA-EDI.	1	PO-20	X	X		X	X	Although PO-20 was not in the Arizona QPAP in 2004, the Commission has since incorporated this measure in the QPAP. Therefore, this finding could affect Tier 1 and Tier 2 payments going forward. Also, Qwest has made retroactive payments in Arizona based on 2004 data for this measure.
10	Qwest does not exclude all non-bill impacting records that originate in IABS from the Billing Completeness (Resale and UNE) measure (BI-4A).	2	BI-4A	X	X	X	X	X	
11	Qwest has been omitting the UNE-P (Centrex 21) product from the Manual Service Order Accuracy (PO-20) results beginning with the December 2004 reporting month.	2	PO-20	X	X		X	X	Although PO-20 was not in the Arizona QPAP in 2004, the Commission has since incorporated this measure in the QPAP. Therefore, this finding could affect Tier 1 and Tier 2 payments going forward. Also, Qwest has made retroactive payments in Arizona based on 2004 data for this measure.
12	Qwest did not input the benchmark for the Installation Interval – Dispatches within MSAs (OP-4A & OP-4B) measures for the Line Splitting product.	1	OP-4		X	X	X	X	
13	Qwest does not have point-to-point controls in place for the transmission of Business Processing Layer (BPL) data from IMA to PANS.	3	PO-4						This is a process finding. The extent to which this can affect reporting is unknown. However, because, PO-4 is not a QPAP measure, there will be no impact on payments. Although Qwest does not concur, Liberty recommends that Qwest institute the proper controls.

Finding Applicability and Status: Arizona

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concurr	Qwest Taking Action	Comments
18	RRS documentation containing Qwest's processes and methods for calculating its performance measures contains errors and is not up to date.	4	All						Liberty recommends that Qwest update its documentation to address the errors and omissions noted.
19	The Service Order Validation (SOV) logic allows some non-inward activity service orders to be included in the calculation of the Manual Service Order Accuracy (PO-20) performance measure.	2	PO-20	X	X		X	X	Although PO-20 was not in the Arizona QPAP in 2004, the Commission has since incorporated this measure in the QPAP. Therefore, this finding could affect Tier 1 and Tier 2 payments going forward. Also, Qwest has made retroactive payments in Arizona based on 2004 data for this measure.
20	Qwest's manual error code override process requires an error code override before a jeopardy notice can be sent, sometimes resulting in a misreporting of the Manual Service Order Accuracy (PO-20) performance results.	2	PO-20	X	X		X		Although PO-20 was not in the Arizona QPAP in 2004, the Commission has since incorporated this measure in the QPAP. Therefore, this finding could affect Tier 1 and Tier 2 payments going forward. Also, Qwest has made retroactive payments in Arizona based on 2004 data for this measure. Qwest believes that the situation noted is rare and therefore declines to take action. Although it cannot confirm Qwest's assertion, Liberty believes it is likely to be true.
21	Qwest personnel improperly issue Service Order Validation (SOV) error code overrides in many cases resulting in the inaccurate reporting of the Manual Service Order Accuracy (PO-20) performance results.	2	PO-20	X	X		X	X	Although PO-20 was not in the Arizona QPAP in 2004, the Commission has since incorporated this measure in the QPAP. Therefore, this finding could affect Tier 1 and Tier 2 payments going forward. Also, Qwest has made retroactive payments in Arizona based on 2004 data for this measure.

Finding Applicability and Status: Arizona

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concurrs	Qwest Taking Action	Comments
22	Qwest software did not properly include all appropriate call center tickets resulting in the inaccurate reporting of the Manual Service Order Accuracy (PO-20) performance results.	2	PO-20	X	X		X	X	Although PO-20 was not in the Arizona QPAP in 2004, the Commission has since incorporated this measure in the QPAP. Therefore, this finding could affect Tier 1 and Tier 2 payments going forward. Also, Qwest has made retroactive payments in Arizona based on 2004 data for this measure.
23	Qwest does not include all eligible EDI billing notifications in PO-7B results.	1	PO-7	X	X		X	X	
24	Qwest does not have point-to-point controls in place for the transmission of CRIS billing information to MCAS.	3	BI-4A						This is a process finding. The extent to which this can affect reporting and QPAP payments is unknown. Although Qwest does not concur, Liberty recommends that Qwest institute the proper controls.
26	Qwest did not include the product disaggregation "EEL_DS1 Capable" in its QPAP payments for New Service Installation Quality Reported to Repair (OP-5A).	1	OP-5A		X	X	X	X	

Finding Applicability and Status: Idaho

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concurrs	Qwest Taking Action	Comments
1	Qwest's process for calculating New Service Installation Quality Reported to Repair (OP-5A) may ignore troubles on some auxiliary lines.	2	OP-5A	X	X	X	X	X	
2	Qwest is excluding troubles from New Service Installation Quality Reported to Repair (OP-5A) that do not correspond to valid exclusions documented in the PID.	2	OP-5A	X	X	X			Qwest does not agree with this finding, but Liberty recommends that Qwest clarify through the appropriate process with the Commission whether its current process for excluding these trouble reports is compliant with the expectation for this measure.
3	Qwest is excluding LSRs with an "unknown state" data entry from LSRs Rejected (PO-4A and PO-4B) which does not correspond to valid exclusions documented in the PID.	2	PO-4	X				X	Although Qwest does not concur with the finding, it is taking action to mitigate the impact. Liberty recommends that Qwest review its actions with the Commission for concurrence.
4	Qwest did not include all products that should roll up to the "DS3 and Above" product disaggregation when calculating the New Service Installation Quality Reported to Repair (OP-5A) measure.	2	OP-5A	X	X	X	X	X	
5	The PID for LSRs Rejected (PO-4) does not clearly address the treatment of LSRs rejected for non-standard reasons.	4	PO-4						Liberty recommends that Qwest review its PID interpretation with the Commission for concurrence.
6	Qwest occasionally classifies retail trouble reports incorrectly as wholesale records with an unknown company ID, and then excludes these records from the calculation of the Repair Appointment Met (MR-	2	MR-9	X					Liberty concurs that no further action is necessary because the impact is small.

Finding Applicability and Status: Idaho

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concurrs	Qwest Taking Action	Comments
	9) measure.								
7	Qwest did not use the correct retail product as the parity standard for the wholesale "Non-Loaded 2-Wire Loop" product disaggregation when calculating the New Service Installation Quality Reported to Repair (OP-5A) measure.	1	OP-5A	X	X	X	X	X	
8	Qwest's documentation of the parity performance standards for the New Service Installation Quality Reported to Repair (OP-5A) measure is unclear and misleading for unbundled loops	4	OP-5A						Qwest has indicated that it is willing to clarify the PID language at the next appropriate opportunity. Liberty recommends this action.
9	Qwest did not implement a requirement of the Manual Service Order Accuracy (PO-20) PID that Service Orders created from CLEC Local Service Requests (LSRs) must be received and completed in the same version of IMA-GUI or IMA-EDI.	1	PO-20	X	X		X	X	
10	Qwest does not exclude all non-bill impacting records that originate in IABS from the Billing Completeness (Resale and UNE) measure (BI-4A).	2	BI-4A	X	X	X	X	X	

Finding Applicability and Status: Idaho

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concur	Qwest Taking Action	Comments
11	Qwest has been omitting the UNE-P (Centrex 21) product from the Manual Service Order Accuracy (PO-20) results beginning with the December 2004 reporting month.	2	PO-20	X	X		X	X	
12	Qwest did not input the benchmark for the Installation Interval – Dispatches within MSAs (OP-4A & OP-4B) measures for the Line Splitting product.	1	OP-4		X	X	X	X	
13	Qwest does not have point-to-point controls in place for the transmission of Business Processing Layer (BPL) data from IMA to PANS.	3	PO-4						This is a process finding. The extent to which this can affect reporting is unknown. However, because, PO-4 is not a QPAP measure, there will be no impact on payments. Although Qwest does not concur, Liberty recommends that Qwest institute the proper controls.
14	Qwest does not correctly calculate the Work Completion Notification Timeliness (PO-6) notification interval for orders originating in northern Idaho.	1	PO-6	X	X		X	X	
18	RRS documentation containing Qwest's processes and methods for calculating its performance measures contains errors and is not up to date.	4	All						Liberty recommends that Qwest update its documentation to address the errors and omissions noted.

Finding Applicability and Status: Idaho

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concurrs	Qwest Taking Action	Comments
19	The Service Order Validation (SOV) logic allows some non-inward activity service orders to be included in the calculation of the Manual Service Order Accuracy (PO-20) performance measure.	2	PO-20	X	X		X	X	
20	Qwest's manual error code override process requires an error code override before a jeopardy notice can be sent, sometimes resulting in a misreporting of the Manual Service Order Accuracy (PO-20) performance results.	2	PO-20	X	X		X		Qwest believes that the situation noted is rare and therefore declines to take action. Although it cannot confirm Qwest's assertion, Liberty believes it is likely to be true.
21	Qwest personnel improperly issue Service Order Validation (SOV) error code overrides in many cases resulting in the inaccurate reporting of the Manual Service Order Accuracy (PO-20) performance results.	2	PO-20	X	X		X	X	
22	Qwest software did not properly include all appropriate call center tickets resulting in the inaccurate reporting of the Manual Service Order Accuracy (PO-20) performance results.	2	PO-20	X	X		X	X	
23	Qwest does not include all eligible EDI billing notifications in PO-7B results.	1	PO-7	X	X		X	X	

Finding Applicability and Status: Idaho

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concur	Qwest Taking Action	Comments
24	Qwest does not have point-to-point controls in place for the transmission of CRIS billing information to MCAS.	3	BI-4A						This is a process finding. The extent to which this can affect reporting and QPAP payments is unknown. Although Qwest does not concur, Liberty recommends that Qwest institute the proper controls.
26	Qwest did not include the product disaggregation "EEL_DS1 Capable" in its QPAP payments for New Service Installation Quality Reported to Repair (OP-5A).	1	OP-5A		X	X	X	X	

Finding Applicability and Status: Iowa

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concurrs	Qwest Taking Action	Comments
1	Qwest's process for calculating New Service Installation Quality Reported to Repair (OP-5A) may ignore troubles on some auxiliary lines.	2	OP-5A	X	X	X	X	X	
2	Qwest is excluding troubles from New Service Installation Quality Reported to Repair (OP-5A) that do not correspond to valid exclusions documented in the PID.	2	OP-5A	X	X	X			Qwest does not agree with this finding, but Liberty recommends that Qwest clarify through the appropriate process with the Commission whether its current process for excluding these trouble reports is compliant with the expectation for this measure.
3	Qwest is excluding LSRs with an "unknown state" data entry from LSRs Rejected (PO-4A and PO-4B) which does not correspond to valid exclusions documented in the PID.	2	PO-4	X				X	Although Qwest does not concur with the finding, it is taking action to mitigate the impact. Liberty recommends that Qwest review its actions with the Commission for concurrence.
4	Qwest did not include all products that should roll up to the "DS3 and Above" product disaggregation when calculating the New Service Installation Quality Reported to Repair (OP-5A) measure.	2	OP-5A	X	X	X	X	X	
5	The PID for LSRs Rejected (PO-4) does not clearly address the treatment of LSRs rejected for non-standard reasons.	4	PO-4						Liberty recommends that Qwest review its PID interpretation with the Commission for concurrence.
6	Qwest occasionally classifies retail trouble reports incorrectly as wholesale records with an unknown company ID, and then excludes these records from the calculation of the Repair Appointment Met (MR-	2	MR-9	X					Liberty concurs that no further action is necessary because the impact is small.

Finding Applicability and Status: Iowa

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concurrs	Qwest Taking Action	Comments
	9) measure.								
7	Qwest did not use the correct retail product as the parity standard for the wholesale "Non-Loaded 2-Wire Loop" product disaggregation when calculating the New Service Installation Quality Reported to Repair (OP-5A) measure.	1	OP-5A	X	X	X	X	X	
8	Qwest's documentation of the parity performance standards for the New Service Installation Quality Reported to Repair (OP-5A) measure is unclear and misleading for unbundled loops	4	OP-5A						Qwest has indicated that it is willing to clarify the PID language at the next appropriate opportunity. Liberty recommends this action.
9	Qwest did not implement a requirement of the Manual Service Order Accuracy (PO-20) PID that Service Orders created from CLEC Local Service Requests (LSRs) must be received and completed in the same version of IMA-GUI or IMA-EDI.	1	PO-20	X	X		X	X	
10	Qwest does not exclude all non-bill impacting records that originate in IABS from the Billing Completeness (Resale and UNE) measure (BI-4A).	2	BI-4A	X	X	X	X	X	

Finding Applicability and Status: Iowa

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concurrs	Qwest Taking Action	Comments
11	Qwest has been omitting the UNE-P (Centrex 21) product from the Manual Service Order Accuracy (PO-20) results beginning with the December 2004 reporting month.	2	PO-20	X	X		X	X	
12	Qwest did not input the benchmark for the Installation Interval – Dispatches within MSAs (OP-4A & OP-4B) measures for the Line Splitting product.	1	OP-4		X	X	X	X	
13	Qwest does not have point-to-point controls in place for the transmission of Business Processing Layer (BPL) data from IMA to PANS.	3	PO-4						This is a process finding. The extent to which this can affect reporting is unknown. However, because, PO-4 is not a QPAP measure, there will be no impact on payments. Although Qwest does not concur, Liberty recommends that Qwest institute the proper controls.
15	Qwest's implementation of the Nebraska, Iowa, Montana, New Mexico, Wyoming, and South Dakota QPAPs does not allow for escalation of Tier 1 payments beyond 24 months.	2	All		X		X	X	
18	RRS documentation containing Qwest's processes and methods for calculating its performance measures contains errors and is not up to date.	4	All						Liberty recommends that Qwest update its documentation to address the errors and omissions noted.

Finding Applicability and Status: Iowa

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concurrs	Qwest Taking Action	Comments
19	The Service Order Validation (SOV) logic allows some non-inward activity service orders to be included in the calculation of the Manual Service Order Accuracy (PO-20) performance measure.	2	PO-20	X	X		X	X	
20	Qwest's manual error code override process requires an error code override before a jeopardy notice can be sent, sometimes resulting in a misreporting of the Manual Service Order Accuracy (PO-20) performance results.	2	PO-20	X	X		X		Qwest believes that the situation noted is rare and therefore declines to take action. Although it cannot confirm Qwest's assertion, Liberty believes it is likely to be true.
21	Qwest personnel improperly issue Service Order Validation (SOV) error code overrides in many cases resulting in the inaccurate reporting of the Manual Service Order Accuracy (PO-20) performance results.	2	PO-20	X	X		X	X	
22	Qwest software did not properly include all appropriate call center tickets resulting in the inaccurate reporting of the Manual Service Order Accuracy (PO-20) performance results.	2	PO-20	X	X		X	X	
23	Qwest does not include all eligible EDI billing notifications in PO-7B results.	1	PO-7	X	X		X	X	

Finding Applicability and Status: Iowa

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concur	Qwest Taking Action	Comments
24	Qwest does not have point-to-point controls in place for the transmission of CRIS billing information to MCAS.	3	BI-4A						This is a process finding. The extent to which this can affect reporting and QPAP payments is unknown. Although Qwest does not concur, Liberty recommends that Qwest institute the proper controls.
26	Qwest did not include the product disaggregation "EEL_DS1 Capable" in its QPAP payments for New Service Installation Quality Reported to Repair (OP-5A).	1	OP-5A		X	X	X	X	

Finding Applicability and Status: Minnesota

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concurrs	Qwest Taking Action	Comments
1	Qwest's process for calculating New Service Installation Quality Reported to Repair (OP-5A) may ignore troubles on some auxiliary lines.	2	OP-5A	X	X	X	X	X	
2	Qwest is excluding troubles from New Service Installation Quality Reported to Repair (OP-5A) that do not correspond to valid exclusions documented in the PID.	2	OP-5A	X	X	X			Qwest does not agree with this finding, but Liberty recommends that Qwest clarify through the appropriate process with the Commission whether its current process for excluding these trouble reports is compliant with the expectation for this measure.
3	Qwest is excluding LSRs with an "unknown state" data entry from LSRs Rejected (PO-4A and PO-4B) which does not correspond to valid exclusions documented in the PID.	2	PO-4	X				X	Although Qwest does not concur with the finding, it is taking action to mitigate the impact. Liberty recommends that Qwest review its actions with the Commission for concurrence.
4	Qwest did not include all products that should roll up to the "DS3 and Above" product disaggregation when calculating the New Service Installation Quality Reported to Repair (OP-5A) measure.	2	OP-5A	X	X	X	X	X	
5	The PID for LSRs Rejected (PO-4) does not clearly address the treatment of LSRs rejected for non-standard reasons.	4	PO-4						Liberty recommends that Qwest review its PID interpretation with the Commission for concurrence.
6	Qwest occasionally classifies retail trouble reports incorrectly as wholesale records with an unknown company ID, and then excludes these records from the calculation of the Repair Appointment Met (MR-	2	MR-9	X					Liberty concurs that no further action is necessary because the impact is small.

Finding Applicability and Status: Minnesota

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concurrs	Qwest Taking Action	Comments
	9) measure.								
7	Qwest did not use the correct retail product as the parity standard for the wholesale "Non-Loaded 2-Wire Loop" product disaggregation when calculating the New Service Installation Quality Reported to Repair (OP-5A) measure.	1	OP-5A	X	X	X	X	X	
8	Qwest's documentation of the parity performance standards for the New Service Installation Quality Reported to Repair (OP-5A) measure is unclear and misleading for unbundled loops	4	OP-5A						Qwest has indicated that it is willing to clarify the PID language at the next appropriate opportunity. Liberty recommends this action.
9	Qwest did not implement a requirement of the Manual Service Order Accuracy (PO-20) PID that Service Orders created from CLEC Local Service Requests (LSRs) must be received and completed in the same version of IMA-GUI or IMA-EDI.	1	PO-20	X			X	X	This finding does not affect QPAP payments at this time, since the Commission has not yet adopted changes in the QPAP to include PO-20.
10	Qwest does not exclude all non-bill impacting records that originate in IABS from the Billing Completeness (Resale and UNE) measure (BI-4A).	2	BI-4A	X	X	X	X	X	

Finding Applicability and Status: Minnesota

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concurrs	Qwest Taking Action	Comments
11	Qwest has been omitting the UNE-P (Centrex 21) product from the Manual Service Order Accuracy (PO-20) results beginning with the December 2004 reporting month.	2	PO-20	X			X	X	This finding does not affect QPAP payments at this time, since the Commission has not yet adopted changes in the QPAP to include PO-20.
12	Qwest did not input the benchmark for the Installation Interval – Dispatches within MSAs (OP-4A & OP-4B) measures for the Line Splitting product.	1	OP-4		X	X	X	X	
13	Qwest does not have point-to-point controls in place for the transmission of Business Processing Layer (BPL) data from IMA to PANS.	3	PO-4						This is a process finding. The extent to which this can affect reporting is unknown. However, because, PO-4 is not a QPAP measure, there will be no impact on payments. Although Qwest does not concur, Liberty recommends that Qwest institute the proper controls.
18	RRS documentation containing Qwest's processes and methods for calculating its performance measures contains errors and is not up to date.	4	All						Liberty recommends that Qwest update its documentation to address the errors and omissions noted.
19	The Service Order Validation (SOV) logic allows some non-inward activity service orders to be included in the calculation of the Manual Service Order Accuracy (PO-20) performance measure.	2	PO-20	X			X	X	This finding does not affect QPAP payments at this time, since the Commission has not yet adopted changes in the QPAP to include PO-20.

Finding Applicability and Status: Minnesota

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concurrs	Qwest Taking Action	Comments
20	Qwest's manual error code override process requires an error code override before a jeopardy notice can be sent, sometimes resulting in a misreporting of the Manual Service Order Accuracy (PO-20) performance results.	2	PO-20	X			X		This finding does not affect QPAP payments at this time, since the Commission has not yet adopted changes in the QPAP to include PO-20. Qwest believes that the situation noted is rare and therefore declines to take action. Although it cannot confirm Qwest's assertion, Liberty believes it is likely to be true.
21	Qwest personnel improperly issue Service Order Validation (SOV) error code overrides in many cases resulting in the inaccurate reporting of the Manual Service Order Accuracy (PO-20) performance results.	2	PO-20	X			X	X	This finding does not affect QPAP payments at this time, since the Commission has not yet adopted changes in the QPAP to include PO-20.
22	Qwest software did not properly include all appropriate call center tickets resulting in the inaccurate reporting of the Manual Service Order Accuracy (PO-20) performance results.	2	PO-20	X			X	X	This finding does not affect QPAP payments at this time, since the Commission has not yet adopted changes in the QPAP to include PO-20.
23	Qwest does not include all eligible EDI billing notifications in PO-7B results.	1	PO-7	X	X	X	X	X	
24	Qwest does not have point-to-point controls in place for the transmission of CRIS billing information to MCAS.	3	BI-4A						This is a process finding. The extent to which this can affect reporting and QPAP payments is unknown. Although Qwest does not concur, Liberty recommends that Qwest institute the proper controls.

Finding Applicability and Status: Minnesota

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concurs	Qwest Taking Action	Comments
25	Qwest incorrectly included PID changes in Minnesota that were not yet approved.	1	All		X	X			Qwest believes that most of the premature implementation of PID changes are in the favor of the CLEC and therefore declines to take action. Assuming that the Commission approves the PID changes for implementation in the QPAP, Liberty concurs that no further action is necessary.
26	Qwest did not include the product disaggregation "EEL_DS1 Capable" in its QPAP payments for New Service Installation Quality Reported to Repair (OP-5A).	1	OP-5A				X	X	This finding does not affect QPAP payments at this time, since the Commission has not yet adopted changes in the QPAP to include OP-5A EEL_DS1 Capable.

Finding Applicability and Status: Montana

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concurrs	Qwest Taking Action	Comments
1	Qwest's process for calculating New Service Installation Quality Reported to Repair (OP-5A) may ignore troubles on some auxiliary lines.	2	OP-5A	X	X	X	X	X	
2	Qwest is excluding troubles from New Service Installation Quality Reported to Repair (OP-5A) that do not correspond to valid exclusions documented in the PID.	2	OP-5A	X	X	X			Qwest does not agree with this finding, but Liberty recommends that Qwest clarify through the appropriate process with the Commission whether its current process for excluding these trouble reports is compliant with the expectation for this measure.
3	Qwest is excluding LSRs with an "unknown state" data entry from LSRs Rejected (PO-4A and PO-4B) which does not correspond to valid exclusions documented in the PID.	2	PO-4	X				X	Although Qwest does not concur with the finding, it is taking action to mitigate the impact. Liberty recommends that Qwest review its actions with the Commission for concurrence.
4	Qwest did not include all products that should roll up to the "DS3 and Above" product disaggregation when calculating the New Service Installation Quality Reported to Repair (OP-5A) measure.	2	OP-5A	X	X	X	X	X	
5	The PID for LSRs Rejected (PO-4) does not clearly address the treatment of LSRs rejected for non-standard reasons.	4	PO-4						Liberty recommends that Qwest review its PID interpretation with the Commission for concurrence.
6	Qwest occasionally classifies retail trouble reports incorrectly as wholesale records with an unknown company ID, and then excludes these records from the calculation of the Repair Appointment Met (MR-	2	MR-9	X					Liberty concurs that no further action is necessary because the impact is small.

Finding Applicability and Status: Montana

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concurrs	Qwest Taking Action	Comments
	9) measure.								
7	Qwest did not use the correct retail product as the parity standard for the wholesale "Non-Loaded 2-Wire Loop" product disaggregation when calculating the New Service Installation Quality Reported to Repair (OP-5A) measure.	1	OP-5A	X	X	X	X	X	
8	Qwest's documentation of the parity performance standards for the New Service Installation Quality Reported to Repair (OP-5A) measure is unclear and misleading for unbundled loops	4	OP-5A						Qwest has indicated that it is willing to clarify the PID language at the next appropriate opportunity. Liberty recommends this action.
9	Qwest did not implement a requirement of the Manual Service Order Accuracy (PO-20) PID that Service Orders created from CLEC Local Service Requests (LSRs) must be received and completed in the same version of IMA-GUI or IMA-EDI.	1	PO-20	X	X		X	X	
10	Qwest does not exclude all non-bill impacting records that originate in IABS from the Billing Completeness (Resale and UNE) measure (BI-4A).	2	BI-4A	X	X	X	X	X	

Finding Applicability and Status: Montana

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concurrs	Qwest Taking Action	Comments
11	Qwest has been omitting the UNE-P (Centrex 21) product from the Manual Service Order Accuracy (PO-20) results beginning with the December 2004 reporting month.	2	PO-20	X	X		X	X	
12	Qwest did not input the benchmark for the Installation Interval – Dispatches within MSAs (OP-4A & OP-4B) measures for the Line Splitting product.	1	OP-4		X	X	X	X	
13	Qwest does not have point-to-point controls in place for the transmission of Business Processing Layer (BPL) data from IMA to PANS.	3	PO-4						This is a process finding. The extent to which this can affect reporting is unknown. However, because, PO-4 is not a QPAP measure, there will be no impact on payments. Although Qwest does not concur, Liberty recommends that Qwest institute the proper controls.
15	Qwest's implementation of the Nebraska, Iowa, Montana, New Mexico, Wyoming, and South Dakota QPAPs does not allow for escalation of Tier 1 payments beyond 24 months.	2	All		X		X	X	
18	RRS documentation containing Qwest's processes and methods for calculating its performance measures contains errors and is not up to date.	4	All						Liberty recommends that Qwest update its documentation to address the errors and omissions noted.

Finding Applicability and Status: Montana

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concurrs	Qwest Taking Action	Comments
19	The Service Order Validation (SOV) logic allows some non-inward activity service orders to be included in the calculation of the Manual Service Order Accuracy (PO-20) performance measure.	2	PO-20	X	X		X	X	
20	Qwest's manual error code override process requires an error code override before a jeopardy notice can be sent, sometimes resulting in a misreporting of the Manual Service Order Accuracy (PO-20) performance results.	2	PO-20	X	X		X		Qwest believes that the situation noted is rare and therefore declines to take action. Although it cannot confirm Qwest's assertion, Liberty believes it is likely to be true.
21	Qwest personnel improperly issue Service Order Validation (SOV) error code overrides in many cases resulting in the inaccurate reporting of the Manual Service Order Accuracy (PO-20) performance results.	2	PO-20	X	X		X	X	
22	Qwest software did not properly include all appropriate call center tickets resulting in the inaccurate reporting of the Manual Service Order Accuracy (PO-20) performance results.	2	PO-20	X	X		X	X	
23	Qwest does not include all eligible EDI billing notifications in PO-7B results.	1	PO-7	X	X		X	X	

Finding Applicability and Status: Montana

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concur	Qwest Taking Action	Comments
24	Qwest does not have point-to-point controls in place for the transmission of CRIS billing information to MCAS.	3	BI-4A						This is a process finding. The extent to which this can affect reporting and QPAP payments is unknown. Although Qwest does not concur, Liberty recommends that Qwest institute the proper controls.
26	Qwest did not include the product disaggregation "EEL_DS1 Capable" in its QPAP payments for New Service Installation Quality Reported to Repair (OP-5A).	1	OP-5A		X	X	X	X	

Finding Applicability and Status: Nebraska

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concurrs	Qwest Taking Action	Comments
1	Qwest's process for calculating New Service Installation Quality Reported to Repair (OP-5A) may ignore troubles on some auxiliary lines.	2	OP-5A	X	X	X	X	X	
2	Qwest is excluding troubles from New Service Installation Quality Reported to Repair (OP-5A) that do not correspond to valid exclusions documented in the PID.	2	OP-5A	X	X	X			Qwest does not agree with this finding, but Liberty recommends that Qwest clarify through the appropriate process with the Commission whether its current process for excluding these trouble reports is compliant with the expectation for this measure.
3	Qwest is excluding LSRs with an "unknown state" data entry from LSRs Rejected (PO-4A and PO-4B) which does not correspond to valid exclusions documented in the PID.	2	PO-4	X				X	Although Qwest does not concur with the finding, it is taking action to mitigate the impact. Liberty recommends that Qwest review its actions with the Commission for concurrence.
4	Qwest did not include all products that should roll up to the "DS3 and Above" product disaggregation when calculating the New Service Installation Quality Reported to Repair (OP-5A) measure.	2	OP-5A	X	X	X	X	X	
5	The PID for LSRs Rejected (PO-4) does not clearly address the treatment of LSRs rejected for non-standard reasons.	4	PO-4						Liberty recommends that Qwest review its PID interpretation with the Commission for concurrence.
6	Qwest occasionally classifies retail trouble reports incorrectly as wholesale records with an unknown company ID, and then excludes these records from the calculation of the Repair Appointment Met (MR-	2	MR-9	X					Liberty concurs that no further action is necessary because the impact is small.

Finding Applicability and Status: Nebraska

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concurrs	Qwest Taking Action	Comments
	9) measure.								
7	Qwest did not use the correct retail product as the parity standard for the wholesale "Non-Loaded 2-Wire Loop" product disaggregation when calculating the New Service Installation Quality Reported to Repair (OP-5A) measure.	1	OP-5A	X	X	X	X	X	
8	Qwest's documentation of the parity performance standards for the New Service Installation Quality Reported to Repair (OP-5A) measure is unclear and misleading for unbundled loops	4	OP-5A						Qwest has indicated that it is willing to clarify the PID language at the next appropriate opportunity. Liberty recommends this action.
9	Qwest did not implement a requirement of the Manual Service Order Accuracy (PO-20) PID that Service Orders created from CLEC Local Service Requests (LSRs) must be received and completed in the same version of IMA-GUI or IMA-EDI.	1	PO-20	X	X		X	X	
10	Qwest does not exclude all non-bill impacting records that originate in IABS from the Billing Completeness (Resale and UNE) measure (BI-4A).	2	BI-4A	X	X	X	X	X	

Finding Applicability and Status: Nebraska

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concurrs	Qwest Taking Action	Comments
11	Qwest has been omitting the UNE-P (Centrex 21) product from the Manual Service Order Accuracy (PO-20) results beginning with the December 2004 reporting month.	2	PO-20	X	X		X	X	
12	Qwest did not input the benchmark for the Installation Interval – Dispatches within MSAs (OP-4A & OP-4B) measures for the Line Splitting product.	1	OP-4		X	X	X	X	
13	Qwest does not have point-to-point controls in place for the transmission of Business Processing Layer (BPL) data from IMA to PANS.	3	PO-4						This is a process finding. The extent to which this can affect reporting is unknown. However, because, PO-4 is not a QPAP measure, there will be no impact on payments. Although Qwest does not concur, Liberty recommends that Qwest institute the proper controls.
15	Qwest's implementation of the Nebraska, Iowa, Montana, New Mexico, Wyoming, and South Dakota QPAPs does not allow for escalation of Tier 1 payments beyond 24 months.	2	All		X		X	X	
16	The Nebraska payment reference table for Tier 2 payments lists payment amounts to state funds that are not consistent with the Nebraska QPAP.	2	All			X	X	X	

Finding Applicability and Status: Nebraska

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concurrs	Qwest Taking Action	Comments
18	RRS documentation containing Qwest's processes and methods for calculating its performance measures contains errors and is not up to date.	4	All						Liberty recommends that Qwest update its documentation to address the errors and omissions noted.
19	The Service Order Validation (SOV) logic allows some non-inward activity service orders to be included in the calculation of the Manual Service Order Accuracy (PO-20) performance measure.	2	PO-20	X	X		X	X	
20	Qwest's manual error code override process requires an error code override before a jeopardy notice can be sent, sometimes resulting in a misreporting of the Manual Service Order Accuracy (PO-20) performance results.	2	PO-20	X	X		X		Qwest believes that the situation noted is rare and therefore declines to take action. Although it cannot confirm Qwest's assertion, Liberty believes it is likely to be true.
21	Qwest personnel improperly issue Service Order Validation (SOV) error code overrides in many cases resulting in the inaccurate reporting of the Manual Service Order Accuracy (PO-20) performance results.	2	PO-20	X	X		X	X	
22	Qwest software did not properly include all appropriate call center tickets resulting in the inaccurate reporting of the Manual Service Order Accuracy (PO-20) performance	2	PO-20	X	X		X	X	

Finding Applicability and Status: Nebraska

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concurrs	Qwest Taking Action	Comments
	results.								
23	Qwest does not include all eligible EDI billing notifications in PO-7B results.	1	PO-7	X	X		X	X	
24	Qwest does not have point-to-point controls in place for the transmission of CRIS billing information to MCAS.	3	BI-4A						This is a process finding. The extent to which this can affect reporting and QPAP payments is unknown. Although Qwest does not concur, Liberty recommends that Qwest institute the proper controls.
26	Qwest did not include the product disaggregation "EEL_DS1 Capable" in its QPAP payments for New Service Installation Quality Reported to Repair (OP-5A).	1	OP-5A		X	X	X	X	

Finding Applicability and Status: New Mexico

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concurrs	Qwest Taking Action	Comments
1	Qwest's process for calculating New Service Installation Quality Reported to Repair (OP-5A) may ignore troubles on some auxiliary lines.	2	OP-5A	X	X	X	X	X	
2	Qwest is excluding troubles from New Service Installation Quality Reported to Repair (OP-5A) that do not correspond to valid exclusions documented in the PID.	2	OP-5A	X	X	X			Qwest does not agree with this finding, but Liberty recommends that Qwest clarify through the appropriate process with the Commission whether its current process for excluding these trouble reports is compliant with the expectation for this measure.
3	Qwest is excluding LSRs with an "unknown state" data entry from LSRs Rejected (PO-4A and PO-4B) which does not correspond to valid exclusions documented in the PID.	2	PO-4	X				X	Although Qwest does not concur with the finding, it is taking action to mitigate the impact. Liberty recommends that Qwest review its actions with the Commission for concurrence.
4	Qwest did not include all products that should roll up to the "DS3 and Above" product disaggregation when calculating the New Service Installation Quality Reported to Repair (OP-5A) measure.	2	OP-5A	X	X	X	X	X	
5	The PID for LSRs Rejected (PO-4) does not clearly address the treatment of LSRs rejected for non-standard reasons.	4	PO-4						Liberty recommends that Qwest review its PID interpretation with the Commission for concurrence.
6	Qwest occasionally classifies retail trouble reports incorrectly as wholesale records with an unknown company ID, and then excludes these records from the calculation of the Repair Appointment Met (MR-	2	MR-9	X					Liberty concurs that no further action is necessary because the impact is small.

Finding Applicability and Status: New Mexico

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concurrs	Qwest Taking Action	Comments
	9) measure.								
7	Qwest did not use the correct retail product as the parity standard for the wholesale "Non-Loaded 2-Wire Loop" product disaggregation when calculating the New Service Installation Quality Reported to Repair (OP-5A) measure.	1	OP-5A	X	X	X	X	X	
8	Qwest's documentation of the parity performance standards for the New Service Installation Quality Reported to Repair (OP-5A) measure is unclear and misleading for unbundled loops	4	OP-5A						Qwest has indicated that it is willing to clarify the PID language at the next appropriate opportunity. Liberty recommends this action.
9	Qwest did not implement a requirement of the Manual Service Order Accuracy (PO-20) PID that Service Orders created from CLEC Local Service Requests (LSRs) must be received and completed in the same version of IMA-GUI or IMA-EDI.	1	PO-20	X	X		X	X	
10	Qwest does not exclude all non-bill impacting records that originate in IABS from the Billing Completeness (Resale and UNE) measure (BI-4A).	2	BI-4A	X	X	X	X	X	

Finding Applicability and Status: New Mexico

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concurrs	Qwest Taking Action	Comments
11	Qwest has been omitting the UNE-P (Centrex 21) product from the Manual Service Order Accuracy (PO-20) results beginning with the December 2004 reporting month.	2	PO-20	X	X		X	X	
12	Qwest did not input the benchmark for the Installation Interval – Dispatches within MSAs (OP-4A & OP-4B) measures for the Line Splitting product.	1	OP-4		X	X	X	X	
13	Qwest does not have point-to-point controls in place for the transmission of Business Processing Layer (BPL) data from IMA to PANS.	3	PO-4						This is a process finding. The extent to which this can affect reporting is unknown. However, because, PO-4 is not a QPAP measure, there will be no impact on payments. Although Qwest does not concur, Liberty recommends that Qwest institute the proper controls.
15	Qwest's implementation of the Nebraska, Iowa, Montana, New Mexico, Wyoming, and South Dakota QPAPs does not allow for escalation of Tier 1 payments beyond 24 months.	2	All		X		X	X	
18	RRS documentation containing Qwest's processes and methods for calculating its performance measures contains errors and is not up to date.	4	All						Liberty recommends that Qwest update its documentation to address the errors and omissions noted.

Finding Applicability and Status: New Mexico

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concurrs	Qwest Taking Action	Comments
19	The Service Order Validation (SOV) logic allows some non-inward activity service orders to be included in the calculation of the Manual Service Order Accuracy (PO-20) performance measure.	2	PO-20	X	X		X	X	
20	Qwest's manual error code override process requires an error code override before a jeopardy notice can be sent, sometimes resulting in a misreporting of the Manual Service Order Accuracy (PO-20) performance results.	2	PO-20	X	X		X		Qwest believes that the situation noted is rare and therefore declines to take action. Although it cannot confirm Qwest's assertion, Liberty believes it is likely to be true.
21	Qwest personnel improperly issue Service Order Validation (SOV) error code overrides in many cases resulting in the inaccurate reporting of the Manual Service Order Accuracy (PO-20) performance results.	2	PO-20	X	X		X	X	
22	Qwest software did not properly include all appropriate call center tickets resulting in the inaccurate reporting of the Manual Service Order Accuracy (PO-20) performance results.	2	PO-20	X	X		X	X	
23	Qwest does not include all eligible EDI billing notifications in PO-7B results.	1	PO-7	X	X		X	X	
24	Qwest does not have point-to-point controls in place for the	3	BI-4A						This is a process finding. The extent to which this can affect reporting and QPAP

Finding Applicability and Status: New Mexico

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concurrs	Qwest Taking Action	Comments
	transmission of CRIS billing information to MCAS.								payments is unknown. Although Qwest does not concur, Liberty recommends that Qwest institute the proper controls.
26	Qwest did not include the product disaggregation "EEL_DS1 Capable" in its QPAP payments for New Service Installation Quality Reported to Repair (OP-5A).	1	OP-5A		X	X	X	X	

Finding Applicability and Status: North Dakota

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concur	Qwest Taking Action	Comments
1	Qwest's process for calculating New Service Installation Quality Reported to Repair (OP-5A) may ignore troubles on some auxiliary lines.	2	OP-5A	X	X	X	X	X	
2	Qwest is excluding troubles from New Service Installation Quality Reported to Repair (OP-5A) that do not correspond to valid exclusions documented in the PID.	2	OP-5A	X	X	X			Qwest does not agree with this finding, but Liberty recommends that Qwest clarify through the appropriate process with the Commission whether its current process for excluding these trouble reports is compliant with the expectation for this measure.
3	Qwest is excluding LSRs with an "unknown state" data entry from LSRs Rejected (PO-4A and PO-4B) which does not correspond to valid exclusions documented in the PID.	2	PO-4	X				X	Although Qwest does not concur with the finding, it is taking action to mitigate the impact. Liberty recommends that Qwest review its actions with the Commission for concurrence.
4	Qwest did not include all products that should roll up to the "DS3 and Above" product disaggregation when calculating the New Service Installation Quality Reported to Repair (OP-5A) measure.	2	OP-5A	X	X	X	X	X	
5	The PID for LSRs Rejected (PO-4) does not clearly address the treatment of LSRs rejected for non-standard reasons.	4	PO-4						Liberty recommends that Qwest review its PID interpretation with the Commission for concurrence.
6	Qwest occasionally classifies retail trouble reports incorrectly as wholesale records with an unknown company ID, and then excludes these records	2	MR-9	X					Liberty concurs that no further action is necessary because the impact is small.

Finding Applicability and Status: North Dakota

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concurrs	Qwest Taking Action	Comments
	from the calculation of the Repair Appointment Met (MR-9) measure.								
7	Qwest did not use the correct retail product as the parity standard for the wholesale "Non-Loaded 2-Wire Loop" product disaggregation when calculating the New Service Installation Quality Reported to Repair (OP-5A) measure.	1	OP-5A	X	X	X	X	X	
8	Qwest's documentation of the parity performance standards for the New Service Installation Quality Reported to Repair (OP-5A) measure is unclear and misleading for unbundled loops	4	OP-5A						Qwest has indicated that it is willing to clarify the PID language at the next appropriate opportunity. Liberty recommends this action.
9	Qwest did not implement a requirement of the Manual Service Order Accuracy (PO-20) PID that Service Orders created from CLEC Local Service Requests (LSRs) must be received and completed in the same version of IMAM-GUI or IMAM-EDI.	1	PO-20	X	X		X	X	
10	Qwest does not exclude all non-bill impacting records that originate in IAMBS from the Billing Completeness (Resale and UNES) measure (BI-4A).	2	BI-4A	X	X	X	X	X	

Finding Applicability and Status: North Dakota

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concurrs	Qwest Taking Action	Comments
11	Qwest has been omitting the UNES-P (Centrex 21) product from the Manual Service Order Accuracy (PO-20) results beginning with the December 2004 reporting month.	2	PO-20	X	X		X	X	
12	Qwest did not input the benchmark for the Installation Interval – Dispatches within Mass (OP-4A & OP-4B) measures for the Line Splitting product.	1	OP-4		X	X	X	X	
13	Qwest does not have point-to-point controls in place for the transmission of Business Processing Layer (BAL) data from IMAM to PANS.	3	PO-4						This is a process finding. The extent to which this can affect reporting is unknown. However, because, PO-4 is not a QPAPS measure, there will be no impact on payments. Although Qwest does not concur, Liberty recommends that Qwest institute the proper controls.
18	ERRS documentation containing Qwest's processes and methods for calculating its performance measures contains errors and is not up to date.	4	All						Liberty recommends that Qwest update its documentation to address the errors and omissions noted.
19	The Service Order Validation (SUV) logic allows some non-inward activity service orders to be included in the calculation of the Manual Service Order Accuracy (PO-20) performance measure.	2	PO-20	X	X		X	X	

Finding Applicability and Status: North Dakota

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concurrs	Qwest Taking Action	Comments
20	Qwest's manual error code override process requires an error code override before a jeopardy notice can be sent, sometimes resulting in a misreporting of the Manual Service Order Accuracy (PO-20) performance results.	2	PO-20	X	X		X		Qwest believes that the situation noted is rare and therefore declines to take action. Although it cannot confirm Qwest's assertion, Liberty believes it is likely to be true.
21	Qwest personnel improperly issue Service Order Validation (SUV) error code overrides in many cases resulting in the inaccurate reporting of the Manual Service Order Accuracy (PO-20) performance results.	2	PO-20	X	X		X	X	
22	Qwest software did not properly include all appropriate call center tickets resulting in the inaccurate reporting of the Manual Service Order Accuracy (PO-20) performance results.	2	PO-20	X	X		X	X	
23	Qwest does not include all eligible EDI billing notifications in PO-7B results.	1	PO-7	X	X		X	X	
24	Qwest does not have point-to-point controls in place for the transmission of CRIES billing information to MACS.	3	BI-4A						This is a process finding. The extent to which this can affect reporting and QPAPS payments is unknown. Although Qwest does not concur, Liberty recommends that Qwest institute the proper controls.

Finding Applicability and Status: North Dakota

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concurrs	Qwest Taking Action	Comments
26	Qwest did not include the product disaggregation "EEL_DS1 Capable" in its QPAPS payments for New Service Installation Quality Reported to Repair (OP-5A).	1	OP-5A		X	X	X	X	

Finding Applicability and Status: Oregon

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concurrs	Qwest Taking Action	Comments
1	Qwest's process for calculating New Service Installation Quality Reported to Repair (OP-5A) may ignore troubles on some auxiliary lines.	2	OP-5A	X	X	X	X	X	
2	Qwest is excluding troubles from New Service Installation Quality Reported to Repair (OP-5A) that do not correspond to valid exclusions documented in the PID.	2	OP-5A	X	X	X			Qwest does not agree with this finding, but Liberty recommends that Qwest clarify through the appropriate process with the Commission whether its current process for excluding these trouble reports is compliant with the expectation for this measure.
3	Qwest is excluding LSRs with an "unknown state" data entry from LSRs Rejected (PO-4A and PO-4B) which does not correspond to valid exclusions documented in the PID.	2	PO-4	X				X	Although Qwest does not concur with the finding, it is taking action to mitigate the impact. Liberty recommends that Qwest review its actions with the Commission for concurrence.
4	Qwest did not include all products that should roll up to the "DS3 and Above" product disaggregation when calculating the New Service Installation Quality Reported to Repair (OP-5A) measure.	2	OP-5A	X	X	X	X	X	
5	The PID for LSRs Rejected (PO-4) does not clearly address the treatment of LSRs rejected for non-standard reasons.	4	PO-4						Liberty recommends that Qwest review its PID interpretation with the Commission for concurrence.
6	Qwest occasionally classifies retail trouble reports incorrectly as wholesale records with an unknown company ID, and then excludes these records from the calculation of the Repair Appointment Met (MR-	2	MR-9	X					Liberty concurs that no further action is necessary because the impact is small.

Finding Applicability and Status: Oregon

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concurrs	Qwest Taking Action	Comments
	9) measure.								
7	Qwest did not use the correct retail product as the parity standard for the wholesale "Non-Loaded 2-Wire Loop" product disaggregation when calculating the New Service Installation Quality Reported to Repair (OP-5A) measure.	1	OP-5A	X	X	X	X	X	
8	Qwest's documentation of the parity performance standards for the New Service Installation Quality Reported to Repair (OP-5A) measure is unclear and misleading for unbundled loops	4	OP-5A						Qwest has indicated that it is willing to clarify the PID language at the next appropriate opportunity. Liberty recommends this action.
9	Qwest did not implement a requirement of the Manual Service Order Accuracy (PO-20) PID that Service Orders created from CLEC Local Service Requests (LSRs) must be received and completed in the same version of IMA-GUI or IMA-EDI.	1	PO-20	X	X		X	X	
10	Qwest does not exclude all non-bill impacting records that originate in IABS from the Billing Completeness (Resale and UNE) measure (BI-4A).	2	BI-4A	X	X	X	X	X	

Finding Applicability and Status: Oregon

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concurrs	Qwest Taking Action	Comments
11	Qwest has been omitting the UNE-P (Centrex 21) product from the Manual Service Order Accuracy (PO-20) results beginning with the December 2004 reporting month.	2	PO-20	X	X		X	X	
12	Qwest did not input the benchmark for the Installation Interval – Dispatches within MSAs (OP-4A & OP-4B) measures for the Line Splitting product.	1	OP-4		X	X	X	X	
13	Qwest does not have point-to-point controls in place for the transmission of Business Processing Layer (BPL) data from IMA to PANS.	3	PO-4						This is a process finding. The extent to which this can affect reporting is unknown. However, because, PO-4 is not a QPAP measure, there will be no impact on payments. Although Qwest does not concur, Liberty recommends that Qwest institute the proper controls.
18	RRS documentation containing Qwest's processes and methods for calculating its performance measures contains errors and is not up to date.	4	All						Liberty recommends that Qwest update its documentation to address the errors and omissions noted.
19	The Service Order Validation (SOV) logic allows some non-inward activity service orders to be included in the calculation of the Manual Service Order Accuracy (PO-20) performance measure.	2	PO-20	X	X		X	X	

Finding Applicability and Status: Oregon

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concurrs	Qwest Taking Action	Comments
20	Qwest's manual error code override process requires an error code override before a jeopardy notice can be sent, sometimes resulting in a misreporting of the Manual Service Order Accuracy (PO-20) performance results.	2	PO-20	X	X		X		Qwest believes that the situation noted is rare and therefore declines to take action. Although it cannot confirm Qwest's assertion, Liberty believes it is likely to be true.
21	Qwest personnel improperly issue Service Order Validation (SOV) error code overrides in many cases resulting in the inaccurate reporting of the Manual Service Order Accuracy (PO-20) performance results.	2	PO-20	X	X		X	X	
22	Qwest software did not properly include all appropriate call center tickets resulting in the inaccurate reporting of the Manual Service Order Accuracy (PO-20) performance results.	2	PO-20	X	X		X	X	
23	Qwest does not include all eligible EDI billing notifications in PO-7B results.	1	PO-7	X	X		X	X	
24	Qwest does not have point-to-point controls in place for the transmission of CRIS billing information to MCAS.	3	BI-4A						This is a process finding. The extent to which this can affect reporting and QPAP payments is unknown. Although Qwest does not concur, Liberty recommends that Qwest institute the proper controls.
26	Qwest did not include the product disaggregation "EEL_DS1 Capable" in its	1	OP-5A		X	X	X	X	

Finding Applicability and Status: Oregon

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concurs	Qwest Taking Action	Comments
	QPAP payments for New Service Installation Quality Reported to Repair (OP-5A).								

Finding Applicability and Status: South Dakota

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concurrs	Qwest Taking Action	Comments
1	Qwest's process for calculating New Service Installation Quality Reported to Repair (OP-5A) may ignore troubles on some auxiliary lines.	2	OP-5A	X	X	X	X	X	
2	Qwest is excluding troubles from New Service Installation Quality Reported to Repair (OP-5A) that do not correspond to valid exclusions documented in the PID.	2	OP-5A	X	X	X			Qwest does not agree with this finding, but Liberty recommends that Qwest clarify through the appropriate process with the Commission whether its current process for excluding these trouble reports is compliant with the expectation for this measure.
3	Qwest is excluding LSRs with an "unknown state" data entry from LSRs Rejected (PO-4A and PO-4B) which does not correspond to valid exclusions documented in the PID.	2	PO-4	X				X	Although Qwest does not concur with the finding, it is taking action to mitigate the impact. Liberty recommends that Qwest review its actions with the Commission for concurrence.
4	Qwest did not include all products that should roll up to the "DS3 and Above" product disaggregation when calculating the New Service Installation Quality Reported to Repair (OP-5A) measure.	2	OP-5A	X	X	X	X	X	
5	The PID for LSRs Rejected (PO-4) does not clearly address the treatment of LSRs rejected for non-standard reasons.	4	PO-4						Liberty recommends that Qwest review its PID interpretation with the Commission for concurrence.
6	Qwest occasionally classifies retail trouble reports incorrectly as wholesale records with an unknown company ID, and then excludes these records from the calculation of the Repair Appointment Met (MR-	2	MR-9	X					Liberty concurs that no further action is necessary because the impact is small.

Finding Applicability and Status: South Dakota

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concurrs	Qwest Taking Action	Comments
	9) measure.								
7	Qwest did not use the correct retail product as the parity standard for the wholesale "Non-Loaded 2-Wire Loop" product disaggregation when calculating the New Service Installation Quality Reported to Repair (OP-5A) measure.	1	OP-5A	X	X	X	X	X	
8	Qwest's documentation of the parity performance standards for the New Service Installation Quality Reported to Repair (OP-5A) measure is unclear and misleading for unbundled loops	4	OP-5A						Qwest has indicated that it is willing to clarify the PID language at the next appropriate opportunity. Liberty recommends this action.
9	Qwest did not implement a requirement of the Manual Service Order Accuracy (PO-20) PID that Service Orders created from CLEC Local Service Requests (LSRs) must be received and completed in the same version of IMA-GUI or IMA-EDI.	1	PO-20	X	X		X	X	
10	Qwest does not exclude all non-bill impacting records that originate in IABS from the Billing Completeness (Resale and UNE) measure (BI-4A).	2	BI-4A	X	X	X	X	X	

Finding Applicability and Status: South Dakota

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concur	Qwest Taking Action	Comments
11	Qwest has been omitting the UNE-P (Centrex 21) product from the Manual Service Order Accuracy (PO-20) results beginning with the December 2004 reporting month.	2	PO-20	X	X		X	X	
12	Qwest did not input the benchmark for the Installation Interval – Dispatches within MSAs (OP-4A & OP-4B) measures for the Line Splitting product.	1	OP-4		X	X	X	X	
13	Qwest does not have point-to-point controls in place for the transmission of Business Processing Layer (BPL) data from IMA to PANS.	3	PO-4						This is a process finding. The extent to which this can affect reporting is unknown. However, because, PO-4 is not a QPAP measure, there will be no impact on payments. Although Qwest does not concur, Liberty recommends that Qwest institute the proper controls.
15	Qwest's implementation of the Nebraska, Iowa, Montana, New Mexico, Wyoming, and South Dakota QPAPs does not allow for escalation of Tier 1 payments beyond 24 months.	2	All		X		X	X	
18	RRS documentation containing Qwest's processes and methods for calculating its performance measures contains errors and is not up to date.	4	All						Liberty recommends that Qwest update its documentation to address the errors and omissions noted.

Finding Applicability and Status: South Dakota

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concurrs	Qwest Taking Action	Comments
19	The Service Order Validation (SOV) logic allows some non-inward activity service orders to be included in the calculation of the Manual Service Order Accuracy (PO-20) performance measure.	2	PO-20	X	X		X	X	
20	Qwest's manual error code override process requires an error code override before a jeopardy notice can be sent, sometimes resulting in a misreporting of the Manual Service Order Accuracy (PO-20) performance results.	2	PO-20	X	X		X		Qwest believes that the situation noted is rare and therefore declines to take action. Although it cannot confirm Qwest's assertion, Liberty believes it is likely to be true.
21	Qwest personnel improperly issue Service Order Validation (SOV) error code overrides in many cases resulting in the inaccurate reporting of the Manual Service Order Accuracy (PO-20) performance results.	2	PO-20	X	X		X	X	
22	Qwest software did not properly include all appropriate call center tickets resulting in the inaccurate reporting of the Manual Service Order Accuracy (PO-20) performance results.	2	PO-20	X	X		X	X	
23	Qwest does not include all eligible EDI billing notifications in PO-7B results.	1	PO-7	X	X		X	X	

Finding Applicability and Status: South Dakota

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concur	Qwest Taking Action	Comments
24	Qwest does not have point-to-point controls in place for the transmission of CRIS billing information to MCAS.	3	BI-4A						This is a process finding. The extent to which this can affect reporting and QPAP payments is unknown. Although Qwest does not concur, Liberty recommends that Qwest institute the proper controls.
26	Qwest did not include the product disaggregation "EEL_DS1 Capable" in its QPAP payments for New Service Installation Quality Reported to Repair (OP-5A).	1	OP-5A		X	X	X	X	

Finding Applicability and Status: Utah

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concurrs	Qwest Taking Action	Comments
1	Qwest's process for calculating New Service Installation Quality Reported to Repair (OP-5A) may ignore troubles on some auxiliary lines.	2	OP-5A	X	X	X	X	X	
2	Qwest is excluding troubles from New Service Installation Quality Reported to Repair (OP-5A) that do not correspond to valid exclusions documented in the PID.	2	OP-5A	X	X	X			Qwest does not agree with this finding, but Liberty recommends that Qwest clarify through the appropriate process with the Commission whether its current process for excluding these trouble reports is compliant with the expectation for this measure.
3	Qwest is excluding LSRs with an "unknown state" data entry from LSRs Rejected (PO-4A and PO-4B) which does not correspond to valid exclusions documented in the PID.	2	PO-4	X				X	Although Qwest does not concur with the finding, it is taking action to mitigate the impact. Liberty recommends that Qwest review its actions with the Commission for concurrence.
4	Qwest did not include all products that should roll up to the "DS3 and Above" product disaggregation when calculating the New Service Installation Quality Reported to Repair (OP-5A) measure.	2	OP-5A	X	X	X	X	X	
5	The PID for LSRs Rejected (PO-4) does not clearly address the treatment of LSRs rejected for non-standard reasons.	4	PO-4						Liberty recommends that Qwest review its PID interpretation with the Commission for concurrence.
6	Qwest occasionally classifies retail trouble reports incorrectly as wholesale records with an unknown company ID, and then excludes these records from the calculation of the Repair Appointment Met (MR-	2	MR-9	X					Liberty concurs that no further action is necessary because the impact is small.

Finding Applicability and Status: Utah

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concurrs	Qwest Taking Action	Comments
	9) measure.								
7	Qwest did not use the correct retail product as the parity standard for the wholesale "Non-Loaded 2-Wire Loop" product disaggregation when calculating the New Service Installation Quality Reported to Repair (OP-5A) measure.	1	OP-5A	X	X	X	X	X	
8	Qwest's documentation of the parity performance standards for the New Service Installation Quality Reported to Repair (OP-5A) measure is unclear and misleading for unbundled loops	4	OP-5A						Qwest has indicated that it is willing to clarify the PID language at the next appropriate opportunity. Liberty recommends this action.
9	Qwest did not implement a requirement of the Manual Service Order Accuracy (PO-20) PID that Service Orders created from CLEC Local Service Requests (LSRs) must be received and completed in the same version of IMA-GUI or IMA-EDI.	1	PO-20	X	X		X	X	
10	Qwest does not exclude all non-bill impacting records that originate in IABS from the Billing Completeness (Resale and UNE) measure (BI-4A).	2	BI-4A	X	X	X	X	X	

Finding Applicability and Status: Utah

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concurrs	Qwest Taking Action	Comments
11	Qwest has been omitting the UNE-P (Centrex 21) product from the Manual Service Order Accuracy (PO-20) results beginning with the December 2004 reporting month.	2	PO-20	X	X		X	X	
12	Qwest did not input the benchmark for the Installation Interval – Dispatches within MSAs (OP-4A & OP-4B) measures for the Line Splitting product.	1	OP-4		X	X	X	X	
13	Qwest does not have point-to-point controls in place for the transmission of Business Processing Layer (BPL) data from IMA to PANS.	3	PO-4						This is a process finding. The extent to which this can affect reporting is unknown. However, because, PO-4 is not a QPAP measure, there will be no impact on payments. Although Qwest does not concur, Liberty recommends that Qwest institute the proper controls.
18	RRS documentation containing Qwest's processes and methods for calculating its performance measures contains errors and is not up to date.	4	All						Liberty recommends that Qwest update its documentation to address the errors and omissions noted.
19	The Service Order Validation (SOV) logic allows some non-inward activity service orders to be included in the calculation of the Manual Service Order Accuracy (PO-20) performance measure.	2	PO-20	X	X		X	X	

Finding Applicability and Status: Utah

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concurrs	Qwest Taking Action	Comments
20	Qwest's manual error code override process requires an error code override before a jeopardy notice can be sent, sometimes resulting in a misreporting of the Manual Service Order Accuracy (PO-20) performance results.	2	PO-20	X	X		X		Qwest believes that the situation noted is rare and therefore declines to take action. Although it cannot confirm Qwest's assertion, Liberty believes it is likely to be true.
21	Qwest personnel improperly issue Service Order Validation (SOV) error code overrides in many cases resulting in the inaccurate reporting of the Manual Service Order Accuracy (PO-20) performance results.	2	PO-20	X	X		X	X	
22	Qwest software did not properly include all appropriate call center tickets resulting in the inaccurate reporting of the Manual Service Order Accuracy (PO-20) performance results.	2	PO-20	X	X		X	X	
23	Qwest does not include all eligible EDI billing notifications in PO-7B results.	1	PO-7	X	X		X	X	
24	Qwest does not have point-to-point controls in place for the transmission of CRIS billing information to MCAS.	3	BI-4A						This is a process finding. The extent to which this can affect reporting and QPAP payments is unknown. Although Qwest does not concur, Liberty recommends that Qwest institute the proper controls.
26	Qwest did not include the product disaggregation "EEL_DS1 Capable" in its	1	OP-5A		X	X	X	X	

Finding Applicability and Status: Utah

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concurrs	Qwest Taking Action	Comments
	QPAP payments for New Service Installation Quality Reported to Repair (OP-5A).								

Finding Applicability and Status: Washington

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concurrs	Qwest Taking Action	Comments
1	Qwest's process for calculating New Service Installation Quality Reported to Repair (OP-5A) may ignore troubles on some auxiliary lines.	2	OP-5A	X	X	X	X	X	
2	Qwest is excluding troubles from New Service Installation Quality Reported to Repair (OP-5A) that do not correspond to valid exclusions documented in the PID.	2	OP-5A	X	X	X			Qwest does not agree with this finding, but Liberty recommends that Qwest clarify through the appropriate process with the Commission whether its current process for excluding these trouble reports is compliant with the expectation for this measure.
3	Qwest is excluding LSRs with an "unknown state" data entry from LSRs Rejected (PO-4A and PO-4B) which does not correspond to valid exclusions documented in the PID.	2	PO-4	X				X	Although Qwest does not concur with the finding, it is taking action to mitigate the impact. Liberty recommends that Qwest review its actions with the Commission for concurrence.
4	Qwest did not include all products that should roll up to the "DS3 and Above" product disaggregation when calculating the New Service Installation Quality Reported to Repair (OP-5A) measure.	2	OP-5A	X	X	X	X	X	
5	The PID for LSRs Rejected (PO-4) does not clearly address the treatment of LSRs rejected for non-standard reasons.	4	PO-4						Liberty recommends that Qwest review its PID interpretation with the Commission for concurrence.
6	Qwest occasionally classifies retail trouble reports incorrectly as wholesale records with an unknown company ID, and then excludes these records from the calculation of the Repair Appointment Met (MR-	2	MR-9	X					Liberty concurs that no further action is necessary because the impact is small.

Finding Applicability and Status: Washington

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concurr	Qwest Taking Action	Comments
	9) measure.								
7	Qwest did not use the correct retail product as the parity standard for the wholesale "Non-Loaded 2-Wire Loop" product disaggregation when calculating the New Service Installation Quality Reported to Repair (OP-5A) measure.	1	OP-5A	X	X	X	X	X	
8	Qwest's documentation of the parity performance standards for the New Service Installation Quality Reported to Repair (OP-5A) measure is unclear and misleading for unbundled loops	4	OP-5A						Qwest has indicated that it is willing to clarify the PID language at the next appropriate opportunity. Liberty recommends this action.
9	Qwest did not implement a requirement of the Manual Service Order Accuracy (PO-20) PID that Service Orders created from CLEC Local Service Requests (LSRs) must be received and completed in the same version of IMA-GUI or IMA-EDI.	1	PO-20	X	X		X	X	
10	Qwest does not exclude all non-bill impacting records that originate in IABS from the Billing Completeness (Resale and UNE) measure (BI-4A).	2	BI-4A	X	X	X	X	X	

Finding Applicability and Status: Washington

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concurrs	Qwest Taking Action	Comments
11	Qwest has been omitting the UNE-P (Centrex 21) product from the Manual Service Order Accuracy (PO-20) results beginning with the December 2004 reporting month.	2	PO-20	X	X		X	X	
12	Qwest did not input the benchmark for the Installation Interval – Dispatches within MSAs (OP-4A & OP-4B) measures for the Line Splitting product.	1	OP-4		X	X	X	X	
13	Qwest does not have point-to-point controls in place for the transmission of Business Processing Layer (BPL) data from IMA to PANS.	3	PO-4						This is a process finding. The extent to which this can affect reporting is unknown. However, because, PO-4 is not a QPAP measure, there will be no impact on payments. Although Qwest does not concur, Liberty recommends that Qwest institute the proper controls.
17	The Washington payment reference table for Tier 1 payments to CLECs for specific products lists "DS1 – LIS-ISP," but that product is not included in the payment input files.	2	All		X		X		Liberty recommends that Qwest and the Commission discuss this issue to clarify the intention of the QPAP.
18	RRS documentation containing Qwest's processes and methods for calculating its performance measures contains errors and is not up to date.	4	All						Liberty recommends that Qwest update its documentation to address the errors and omissions noted.

Finding Applicability and Status: Washington

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concurrs	Qwest Taking Action	Comments
19	The Service Order Validation (SOV) logic allows some non-inward activity service orders to be included in the calculation of the Manual Service Order Accuracy (PO-20) performance measure.	2	PO-20	X	X		X	X	
20	Qwest's manual error code override process requires an error code override before a jeopardy notice can be sent, sometimes resulting in a misreporting of the Manual Service Order Accuracy (PO-20) performance results.	2	PO-20	X	X		X		Qwest believes that the situation noted is rare and therefore declines to take action. Although it cannot confirm Qwest's assertion, Liberty believes it is likely to be true.
21	Qwest personnel improperly issue Service Order Validation (SOV) error code overrides in many cases resulting in the inaccurate reporting of the Manual Service Order Accuracy (PO-20) performance results.	2	PO-20	X	X		X	X	
22	Qwest software did not properly include all appropriate call center tickets resulting in the inaccurate reporting of the Manual Service Order Accuracy (PO-20) performance results.	2	PO-20	X	X		X	X	
23	Qwest does not include all eligible EDI billing notifications in PO-7B results.	1	PO-7	X	X		X	X	

Finding Applicability and Status: Washington

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concur	Qwest Taking Action	Comments
24	Qwest does not have point-to-point controls in place for the transmission of CRIS billing information to MCAS.	3	BI-4A						This is a process finding. The extent to which this can affect reporting and QPAP payments is unknown. Although Qwest does not concur, Liberty recommends that Qwest institute the proper controls.

Finding Applicability and Status: Wyoming

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concurrs	Qwest Taking Action	Comments
1	Qwest's process for calculating New Service Installation Quality Reported to Repair (OP-5A) may ignore troubles on some auxiliary lines.	2	OP-5A	X	X	X	X	X	
2	Qwest is excluding troubles from New Service Installation Quality Reported to Repair (OP-5A) that do not correspond to valid exclusions documented in the PID.	2	OP-5A	X	X	X			Qwest does not agree with this finding, but Liberty recommends that Qwest clarify through the appropriate process with the Commission whether its current process for excluding these trouble reports is compliant with the expectation for this measure.
3	Qwest is excluding LSRs with an "unknown state" data entry from LSRs Rejected (PO-4A and PO-4B) which does not correspond to valid exclusions documented in the PID.	2	PO-4	X				X	Although Qwest does not concur with the finding, it is taking action to mitigate the impact. Liberty recommends that Qwest review its actions with the Commission for concurrence.
4	Qwest did not include all products that should roll up to the "DS3 and Above" product disaggregation when calculating the New Service Installation Quality Reported to Repair (OP-5A) measure.	2	OP-5A	X	X	X	X	X	
5	The PID for LSRs Rejected (PO-4) does not clearly address the treatment of LSRs rejected for non-standard reasons.	4	PO-4						Liberty recommends that Qwest review its PID interpretation with the Commission for concurrence.
6	Qwest occasionally classifies retail trouble reports incorrectly as wholesale records with an unknown company ID, and then excludes these records from the calculation of the Repair Appointment Met (MR-	2	MR-9	X					Liberty concurs that no further action is necessary because the impact is small.

Finding Applicability and Status: Wyoming

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concurr	Qwest Taking Action	Comments
	9) measure.								
7	Qwest did not use the correct retail product as the parity standard for the wholesale "Non-Loaded 2-Wire Loop" product disaggregation when calculating the New Service Installation Quality Reported to Repair (OP-5A) measure.	1	OP-5A	X	X	X	X	X	
8	Qwest's documentation of the parity performance standards for the New Service Installation Quality Reported to Repair (OP-5A) measure is unclear and misleading for unbundled loops	4	OP-5A						Qwest has indicated that it is willing to clarify the PID language at the next appropriate opportunity. Liberty recommends this action.
9	Qwest did not implement a requirement of the Manual Service Order Accuracy (PO-20) PID that Service Orders created from CLEC Local Service Requests (LSRs) must be received and completed in the same version of IMA-GUI or IMA-EDI.	1	PO-20	X	X		X	X	
10	Qwest does not exclude all non-bill impacting records that originate in IABS from the Billing Completeness (Resale and UNE) measure (BI-4A).	2	BI-4A	X	X	X	X	X	

Finding Applicability and Status: Wyoming

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concurrs	Qwest Taking Action	Comments
11	Qwest has been omitting the UNE-P (Centrex 21) product from the Manual Service Order Accuracy (PO-20) results beginning with the December 2004 reporting month.	2	PO-20	X	X		X	X	
12	Qwest did not input the benchmark for the Installation Interval – Dispatches within MSAs (OP-4A & OP-4B) measures for the Line Splitting product.	1	OP-4		X	X	X	X	
13	Qwest does not have point-to-point controls in place for the transmission of Business Processing Layer (BPL) data from IMA to PANS.	3	PO-4						This is a process finding. The extent to which this can affect reporting is unknown. However, because, PO-4 is not a QPAP measure, there will be no impact on payments. Although Qwest does not concur, Liberty recommends that Qwest institute the proper controls.
15	Qwest's implementation of the Nebraska, Iowa, Montana, New Mexico, Wyoming, and South Dakota QPAPs does not allow for escalation of Tier 1 payments beyond 24 months.	2	All		X		X	X	
18	RRS documentation containing Qwest's processes and methods for calculating its performance measures contains errors and is not up to date.	4	All						Liberty recommends that Qwest update its documentation to address the errors and omissions noted.

Finding Applicability and Status: Wyoming

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concurrs	Qwest Taking Action	Comments
19	The Service Order Validation (SOV) logic allows some non-inward activity service orders to be included in the calculation of the Manual Service Order Accuracy (PO-20) performance measure.	2	PO-20	X	X		X	X	
20	Qwest's manual error code override process requires an error code override before a jeopardy notice can be sent, sometimes resulting in a misreporting of the Manual Service Order Accuracy (PO-20) performance results.	2	PO-20	X	X		X		Qwest believes that the situation noted is rare and therefore declines to take action. Although it cannot confirm Qwest's assertion, Liberty believes it is likely to be true.
21	Qwest personnel improperly issue Service Order Validation (SOV) error code overrides in many cases resulting in the inaccurate reporting of the Manual Service Order Accuracy (PO-20) performance results.	2	PO-20	X	X		X	X	
22	Qwest software did not properly include all appropriate call center tickets resulting in the inaccurate reporting of the Manual Service Order Accuracy (PO-20) performance results.	2	PO-20	X	X		X	X	
23	Qwest does not include all eligible EDI billing notifications in PO-7B results.	1	PO-7	X	X		X	X	

Finding Applicability and Status: Wyoming

Finding Number	Finding	Classification	Applicable Measure	May Affect Measure Reporting	May Affect Tier 1 Payments	May Affect Tier 2 Payments	Qwest Concur	Qwest Taking Action	Comments
24	Qwest does not have point-to-point controls in place for the transmission of CRIS billing information to MCAS.	3	BI-4A						This is a process finding. The extent to which this can affect reporting and QPAP payments is unknown. Although Qwest does not concur, Liberty recommends that Qwest institute the proper controls.
26	Qwest did not include the product disaggregation "EEL_DS1 Capable" in its QPAP payments for New Service Installation Quality Reported to Repair (OP-5A).	1	OP-5A		X	X	X	X	

Appendix B: Glossary of Acronyms

ACNA	Access Carrier Name Abbreviation
ASR	access service request
BAN	Billing Account Number
BCSOP	Service Order Processing data base
BCSUP	Service Order Supplemental data base
BPL	Business Process Layer
BRI	Basic Rate Interface
CFA	Customer Facility Assignment
CLEC	competitive local exchange carrier
CPE	Customer Provided Equipment or Customer Premises Equipment
CRIS	Customer Records Information System
CRM	Customer Request Management
DS0	Digital Signaling Level 0
DS1	Digital Signaling Level 1
DS3	Digital Signaling Level 3
DSL	Digital Subscriber Line
EDI	Electronic Data Interchange
EEL	Enhanced Extended Link
EFT	electronic funds transfer
EXACT	Exchange Access Control & Tracking
GUI	graphical user interface
FOC	firm order confirmation
FTP	File Transfer Protocol
FTS	Flow Through System
IABS	Integrated Access Billing System
IIS	Interconnect Imaging System
IMA	Interconnect Mediated Access
IMA-EDI	Interconnect Mediated Access-Electronic Data Interchange
IMA-GUI	Interconnect Mediated Access-Graphical User Interface
ISDN	Integrated Services Digital Network
ISP	internet service provider
LMOS	Loop Maintenance Operating System
LNP	local number portability
LSR	local service request

LTPA	Long Term PID Administration
M&R	maintenance and repair
MBIT	Megabit
MCAS	Mechanized Administration System
MOU	minutes of use
MSA	Metropolitan Statistical Area
MTAS	Mechanized Trouble Analysis System
NPA	Numbering Plan Area ("area code")
NXX	telephone number prefix ("exchange")
OCN	Optical Capacity Network
PANS	Performance Analysis System
PDF	Program Development Facility
PIA	Provider Initiated Activity
PID	Performance Indicator Definitions
PON	purchase order number
POTS	plain old telephone service
QPAP	Qwest Performance Assurance Plan
QPARS	Qwest Performance Assurance Reporting System
QPP	Qwest Platform Plus
ROC	Regional Operating Committee
RRS	Regulatory Reporting System
RSOLAR	Regional Service Order Logistics and Reference
RSOR	Regional Service Order Repository
SAS	Statistical Analysis System
SGAT	Statement of Generally Available Terms and Conditions
SOLAR	Service Order Logistics and Reference
SOP	Service Order Processor
SOPAD	Service Order Processing and Distribution
SOV	Service Order Validation
TAG	Technical Advisory Group
UDIT	Unbundled Dedicated Interoffice Transport
UNE	Unbundled Network Element
UNE-P	Unbundled Network Element – Platform
USOC	Universal Service Order Code
WFA	Work Force Administration
WFA-C	Work Force Administration – Control

xDSL	Digital Subscriber Line products (for example, Asynchronous Digital Subscriber Line or ADSL)
------	--